

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	((triisopropylsilyloxy carbonyl) near5 ((methylene near2 blue) or phenothiazine or methylthionine or thionine))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 14:43
L2	6	((triisopropylsilyloxy carbonyl or triisopropyl or silyloxy carbonyl) near5 ((methylene near2 blue) or phenothiazine or methylthionine or thionine))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 14:44

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	924343	(polyhydroxystyrene\$1 or hydroxystyrene\$1 or ((polyhydroxy or hydroxy or hydroxyl) or polymeric))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:17
L2	8299	(polyhydroxystyrene\$1 or hydroxystyrene\$1 or ((polyhydroxy or hydroxy or hydroxyl) near2 polymeric))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:21
L3	47	I2 same ((methylene near5 blue) or leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:42
L4	210891	(polyhydroxystyrene\$1 or hydroxystyrene\$1 or pva or polyvinylalcohol or vinylalcohol or ((polyvinyl or poly) near2 alcohol) or ((polyhydroxy or hydroxy or hydroxyl) near2 polym\$4))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:51
L5	2763	I4 same ((methylene near5 blue) or leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:52
L6	169	I5 and (methylene near5 blue) with (leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:58
L7	64004	(polyhydroxystyrene\$1 or hydroxystyrene\$1 or ((hydroxy or hydroxyethyl) near5 cellulos\$4) or hec or ((polyhydroxy or hydroxy or hydroxyl) near2 polym\$4))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:42
L8	843	I7 same ((methylene near5 blue) or leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:42
L9	77	I8 and (methylene near5 blue) with (leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:57

EAST Search History

L10	39	I9 not I6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:43
L11	7675	(polyhydroxystyrene\$1 or hydroxystyrene\$1 or (hydroxy near2 styrene))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:56
L12	43	I11 same ((methylene near5 blue) or leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:52
L13	98	(polyhydroxystyrene\$1 or hydroxystyrene\$1 or (hydroxy near2 styrene)) near5 (pmma or polymethylmethacrylate or methylmethacrylate or branched)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:57
L14	1	I13 and (methylene near5 blue) with (leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:58
L15	8	I13 and ((methylene near5 blue) or leuco or colorless or colourless)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/31 13:58

\$%^STN;HighlightOn= ***;HighlightOff=***

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NEWS 17 FEB 28 TOXCENTER reloaded with enhancements
NEWS 18 FEB 28 REGISTRY/ZREGISTRY enhanced with more experimental spectral
property data
NEWS 19 MAR 01 INSPEC reloaded and enhanced
NEWS 20 MAR 03 Updates in PATDPA; addition of IPC 8 data without attributes
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=> tra rn 11

L2 TRANSFER L1 1- RN : 34 TERMS
L3 34 L2

=> s triisopropyl? and l3
2602 TRIISOPROPYL?
L4 0 TRIISOPROPYL? AND L3

=> s isopropyl? and l3
106316 ISOPROPYL?
L5 0 ISOPROPYL? AND L3

=> s methylene and l3
1480084 METHYLENE
3 METHYLENES
1480084 METHYLENE
(METHYLENE OR METHYLENES)
L6 2 METHYLENE AND L3

=> d all 1-2

L6 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
RN ***7220-79-3*** REGISTRY
ED Entered STN: 16 Nov 1984
CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride, trihydrate (9CI)
(CA INDEX NAME)
OTHER CA INDEX NAMES:
CN C.I. Basic Blue 9, trihydrate (8CI)
OTHER NAMES:
CN 3,7-Bis(dimethylamino)phenazathionium chloride trihydrate
CN ***Methylene blue trihydrate***
MF C16 H18 N3 S . Cl . 3 H2 O
LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, CSNB, IPA,
MRCK*, MSDS-OHS, NIOSHTIC, PS, RTECS*, TOXCENTER, USAN, USPAT2,
USPATFULL
(*File contains numerically searchable property data)
DT.CA CAPplus document type: Journal; Patent
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);
PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties); USES
(Uses); NORL (No role in record)
CRN (7060-82-4)

Ring System Data

Elemental Analysis	Elemental Sequence	Size of the Rings	Ring System Formula	Ring Identifier	RID	Occurrence Count
EA	ES	SZ	RF	RID		

C4NS-C6-C6|NC2SC2-C6-C6|6-6-6 |C12NS |2508.272.19|1

/ Structure 1 in file .gra /

11 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 142:263184 CA
TI Limited play data storage media, adhesive and coating formulations
IN Wisnudel, Marc Brian; Olson, Daniel Robert; Simon, David Andrew; Longley,
Kathryn Lynn; Lindholm, Edward Paul
PA USA
SO U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C08L001-00
NCL 106163010

FAN: CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005051053	A1	20050310	US 2003-657632	20030908
	WO 2005027110	A1	20050324	WO 2004-US23219	20040720
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	US 2003-657632		20030908		
AB	In the formulation for a reactive dye layer for a limited-play optical storage medium, the reactive formulation includes .gtoreq.1 carrier material or curable acrylate monomer, .gtoreq.1 reactive material within the carrier material or acrylate monomer, and .gtoreq.1 photo-bleaching retarder material within the .gtoreq.1 adhesive material. The .gtoreq.1 photo-bleaching retarder material includes .gtoreq.1 polymeric polyhydroxy compd. selected from polyhydroxystyrenes, cellulose, and functionalized cellulose derivs.				
ST	photobleach retarder coating adhesive optical recording disk; reactive dye coating adhesive optical recording disk; PMMA carrier coating adhesive optical recording disk				
IT	Polyimides, uses				
	Polyketones				
	Polysulfones, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (polyether-; polymeric photobleach retarder in adhesive and coating formulations for a reactive dye layer for a limited-play optical storage medium)				
IT	Polyethers, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (polyimide-; polymeric photobleach retarder in adhesive and coating formulations for a reactive dye layer for a limited-play optical storage medium)				
IT	Polyethers, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (polyketone-; polymeric photobleach retarder in adhesive and coating formulations for a reactive dye layer for a limited-play optical storage medium)				
IT	Adhesives				
	Coating materials				
	Liquid crystals, polymeric				
	Optical disks				
	(polymeric photobleach retarder in adhesive and coating formulations for a reactive dye layer for a limited-play optical storage medium)				
IT	Fluoropolymers, uses				
	Polyamides, uses				
	Polycarbonates, uses				
	Polyesters, uses				
	Polyimides, uses				
	Polyolefins				
	Polyoxymethylene, uses				
	Polythiophenylene				
	RL: TEM (Technical or engineered material use); USES (Uses) (polymeric photobleach retarder in adhesive and coating formulations for a reactive dye layer for a limited-play optical storage medium)				
IT	Polyethers, uses				
	RL: TEM (Technical or engineered material use); USES (Uses) (polysulfone-; polymeric photobleach retarder in adhesive and coating formulations for a reactive dye layer for a limited-play optical storage medium)				
IT	9011-14-7, Poly(methyl methacrylate)				
	RL: TEM (Technical or engineered material use); USES (Uses) (carrier; polymeric photobleach retarder in adhesive and coating				

formulations for a reactive dye layer for a limited-play optical storage medium)

IT 92-31-9, Toluidine blue O 92-88-6, 4,4'-Biphenol 613-11-6 4712-70-3
7220-79-3, Methylene blue trihydrate 9002-85-1, Polyvinylidene chloride
9002-86-2, Polyvinyl chloride 9003-17-2, Polybutadiene 9003-20-7,
Polyvinyl acetate 9003-53-6 9003-56-9, ABS resin 9004-34-6,
Cellulose, uses 9004-35-7 9004-36-8, Cellulose acetate butyrate
9004-48-2, Cellulose propionate 9004-57-3, Ethyl cellulose 9004-64-2,
Hydroxypropyl cellulose 9004-65-3, Hydroxypropyl methyl cellulose
9004-67-5, Methyl cellulose 9012-09-3 9041-56-9, Hydroxybutyl methyl
cellulose 15625-89-5, SR 351 24937-78-8 24937-79-9, Polyvinylidene
fluoride 24979-71-3, 4-Hydroxystyrene; methyl methacrylate copolymer
24981-14-4, Polyvinyl fluoride 25014-41-9, Polyacrylonitrile 25038-71-
5, Ethylene-tetrafluoroethylene copolymer 25086-15-1, Methyl
methacrylate/ methacrylic acid copolymer 48145-04-6, SR 339 55840-82-9
, Basic blue 3 59269-51-1, Polyhydroxystyrene 80413-52-1, SR 495
RL: TEM (Technical or engineered material use); USES (Uses)
(polymeric photobleach retarder in adhesive and coating formulations
for a reactive dye layer for a limited-play optical storage medium)

REFERENCE 2

AN 141:308737 CA
TI Using fragment chemistry data mining and probabilistic neural networks in screening chemicals for acute toxicity to the fathead minnow
AU Niculescu, S. P.; Atkinson, A.; Hammond, G.; Lewis, M.
CS Burlington, ON, L7N 2Z9, Can.
SO SAR and QSAR in Environmental Research (2004), 15(4), 293-309
CODEN: SQERED; ISSN: 1062-936X
PB Taylor & Francis Ltd.
DT Journal
LA English
CC 4-1 (Toxicology)
AB The paper is illustrating how the general data mining methodol. may be adapted to provide solns. to the problem of high throughput virtual screening of org. chems. for possible acute toxicity to the fathead minnow fish. The present approach involves mining fragment information from chem. structures and is using probabilistic neural networks to model the relationship between structure and toxicity. Probabilistic neural networks implement a special class of multivariate non-linear Bayesian statistical models. The math. principles supporting their use for value prediction purposes are clarified and their peculiarities discussed. As part of the research phase of the data mining process, a dataset consisting of 800 structures and assocd. fathead minnow (Pimephales promelas) 96-h LC50 acute toxicity endpoint information is used for both the purpose of identifying an advantageous combination of fragment descriptors and for training the neural networks. As a result, two powerful models are generated. Model 1 implements the basic PNN with Gaussian kernel (statistical corrections included) while Model 2 implements the PNN with Gaussian kernel and sepd. variables. External validation is performed using a sep. dataset consisting of 86 structures and assocd. toxicity information. Both learning and generalization capabilities of the two models are investigated and their limitations discussed.
ST model probabilistic neural network toxicity fathead minnow; structure activity relationship org chem toxicity Pimephales
IT Alcohols, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(C12-13, ethoxylated; using fragment chem. data mining and probabilistic neural networks in screening chems. for acute toxicity to fathead minnow)
IT Alcohols, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(C9-11, ethoxylated; using fragment chem. data mining and probabilistic neural networks in screening chems. for acute toxicity to fathead minnow)
IT Simulation and Modeling
(neural network; using fragment chem. data mining and probabilistic neural networks in screening chems. for acute toxicity to fathead minnow)
IT Structure-activity relationship
(toxic; using fragment chem. data mining and probabilistic neural

networks in screening chems. for acute toxicity to fathead minnow)

IT Pimephales promelas
 (using fragment chem. data mining and probabilistic neural networks in screening chems. for acute toxicity to fathead minnow)

IT 50-00-0, Formaldehyde, biological studies 50-06-6, biological studies
 50-29-3, biological studies 51-28-5, biological studies 51-79-6
 52-68-6 54-21-7 55-18-5 55-21-0, Benzamide 55-38-9 56-23-5,
 biological studies 56-35-9 56-37-1 56-38-2 57-06-7 57-14-7
 57-15-8 57-33-0 57-43-2 57-74-9 58-08-2, biological studies
 58-27-5 58-89-9 58-90-2 59-50-7 59-97-2 60-00-4, biological
 studies 60-13-9 60-29-7, biological studies 60-41-3 60-57-1
 62-53-3, Benzenamine, biological studies 62-55-5, Ethanethioamide
 62-73-7 62-75-9 63-25-2 64-17-5, Ethanol, biological studies
 64-19-7, Acetic acid, biological studies 65-30-5 65-45-2 65-85-0,
 Benzoic acid, biological studies 66-25-1, Hexanal 66-76-2 67-36-7
 67-56-1, Methanol, biological studies 67-63-0, 2-Propanol, biological
 studies 67-64-1, 2-Propanone, biological studies 67-66-3, biological
 studies 67-68-5, biological studies 67-72-1 68-12-2, biological
 studies 70-30-4 70-69-9 71-23-8, 1-Propanol, biological studies
 71-36-3, 1-Butanol, biological studies 71-41-0, 1-Pentanol, biological
 studies 71-43-2, Benzene, biological studies 71-55-6 71-73-8
 72-20-8 72-43-5 74-90-8, Hydrocyanic acid, biological studies
 75-05-8, Acetonitrile, biological studies 75-07-0, Acetaldehyde,
 biological studies 75-09-2, biological studies 75-21-8, Oxirane,
 biological studies 75-31-0, 2-Propanamine, biological studies 75-35-4,
 biological studies 75-36-5, Acetyl chloride 75-47-8 75-57-0
 75-65-0, biological studies 75-89-8 75-97-8 76-01-7 76-03-9,
 biological studies 76-22-2 76-44-8 76-87-9 77-47-4 77-71-4
 77-73-6 77-74-7 77-75-8 78-27-3 78-51-3 78-59-1 78-83-1,
 biological studies 78-87-5 78-90-0, 1,2-Propanediamine 78-92-2,
 2-Butanol 78-93-3, 2-Butanone, biological studies 78-96-6 78-97-7
 79-00-5 79-01-6, biological studies 79-06-1, 2-Propenamide, biological
 studies 79-19-6, Hydrazinecarbothioamide 79-20-9 79-34-5 79-95-8
 80-05-7, biological studies 80-46-6 80-52-4 80-62-6 81-19-6
 83-32-9 83-34-1 83-79-4 84-62-8 84-66-2 84-74-2 85-00-7
 85-47-2, 1-Naphthalenesulfonic acid 85-68-7 86-50-0 86-57-7
 86-74-8, 9H-Carbazole 87-17-2 87-61-6 87-68-3 87-72-9,
 L-Arabinopyranose 87-86-5 87-91-2 88-06-2 88-30-2 88-68-6
 88-72-2 88-73-3 88-75-5 88-85-7 89-61-2 89-62-3 89-83-8
 90-02-8, biological studies 90-12-0 90-15-3, 1-Naphthalenol 90-43-7,
 [1,1'-Biphenyl]-2-ol 90-47-1, 9H-Xanthen-9-one 90-59-5 91-20-3,
 Naphthalene, biological studies 91-22-5, Quinoline, biological studies
 91-23-6 91-65-6 91-66-7 91-88-3 92-52-4, 1,1'-Biphenyl, biological
 studies 92-88-6, [1,1'-Biphenyl]-4,4'-diol 93-89-0 93-91-4 94-09-7
 94-62-2 94-67-7 94-68-8 94-75-7, biological studies 94-81-5
 95-01-2 95-16-9, Benzothiazole 95-47-6, biological studies 95-48-7,
 biological studies 95-49-8 95-50-1 95-51-2 95-52-3 95-53-4,
 biological studies 95-57-8 95-63-6 95-65-8 95-73-8 95-75-0
 95-76-1 95-80-7 95-82-9 95-94-3 95-95-4 96-05-9 96-13-9
 96-17-3 96-18-4 96-22-0, 3-Pentanone 96-29-7 96-80-0 97-02-9
 97-23-4 98-01-1, 2-Furancarboxaldehyde, biological studies 98-04-4
 98-08-8 98-54-4 98-56-6 98-82-8 98-86-2, biological studies
 98-88-4, Benzoyl chloride 98-95-3, biological studies 99-03-6
 99-08-1 99-35-4 99-52-5 99-55-8 99-61-6 99-65-0 99-88-7
 99-97-8 99-99-0 100-01-6, biological studies 100-02-7, biological
 studies 100-10-7 100-25-4 100-37-8 100-41-4, biological studies
 100-42-5, biological studies 100-44-7, biological studies 100-46-9,
 Benzenemethanamine, biological studies 100-47-0, Benzonitrile,
 biological studies 100-51-6, Benzenemethanol, biological studies
 100-52-7, Benzaldehyde, biological studies 100-61-8, biological studies
 100-64-1 100-70-9, 2-Pyridinecarbonitrile 100-71-0 100-79-8
 100-97-0, biological studies 101-84-8 102-08-9 102-27-2 102-69-2
 102-71-6, biological studies 103-05-9 103-76-4, 1-Piperazineethanol
 103-83-3 103-90-2 104-13-2 104-40-5 104-51-8 104-76-7
 104-88-1, biological studies 104-90-5 105-14-6 105-53-3
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (using fragment chem. data mining and probabilistic neural networks in screening chems. for acute toxicity to fathead minnow)

IT 105-60-2, biological studies 105-67-9 105-75-9 105-99-7 106-40-1
 106-42-3, biological studies 106-43-4 106-44-5, biological studies
 106-46-7 106-47-8, biological studies 106-48-9 106-49-0, biological
 studies 106-51-4, 2,5-Cyclohexadiene-1,4-dione, biological studies

106-63-8 106-89-8, biological studies 106-94-5 107-02-8, 2-Propenal, biological studies 107-05-1 107-06-2, biological studies 107-07-3, biological studies 107-10-8, 1-Propanamine, biological studies 107-12-0, Propanenitrile 107-13-1, 2-Propenenitrile, biological studies 107-14-2 107-15-3, 1,2-Ethanediamine, biological studies 107-18-6, 2-Propen-1-ol, biological studies 107-19-7, 2-Propyn-1-ol 107-21-1, 1,2-Ethanediol, biological studies 107-22-2, Ethanediol 107-29-9 107-41-5 107-45-9 107-47-1 107-49-3 107-64-2 107-87-9, 2-Pentanone 108-05-4, Acetic acid ethenyl ester, biological studies 108-10-1 108-20-3 108-38-3, biological studies 108-39-4, biological studies 108-41-8 108-46-3, 1,3-Benzenediol, biological studies 108-59-8 108-70-3 108-86-1, biological studies 108-88-3, biological studies 108-89-4 108-90-7, biological studies 108-93-0, Cyclohexanol, biological studies 108-94-1, Cyclohexanone, biological studies 108-95-2, Phenol, biological studies 108-99-6 109-01-3 109-06-8 109-07-9 109-21-7 109-60-4 109-64-8 109-65-9 109-73-9, 1-Butanamine, biological studies 109-75-1, 3-Butenenitrile 109-76-2, 1,3-Propanediamine 109-77-3, Propanedinitrile 109-85-3 109-86-4 109-87-5 109-89-7, biological studies 109-97-7, 1H-Pyrrole 109-99-9, biological studies 110-00-9, Furan 110-06-5 110-12-3 110-40-7 110-43-0, 2-Heptanone 110-54-3, Hexane, biological studies 110-56-5 110-58-7, 1-Pantanamine 110-62-3, Pentanal 110-65-6, 2-Butyne-1,4-diol 110-73-6 110-80-5 110-82-7, Cyclohexane, biological studies 110-86-1, Pyridine, biological studies 110-88-3, 1,3,5-Trioxane, biological studies 110-93-0 111-13-7, 2-Octanone 111-15-9 111-25-1 111-26-2, 1-Hexanamine 111-27-3, 1-Hexanol, biological studies 111-42-2, biological studies 111-46-6, biological studies 111-47-7 111-68-2, 1-Heptanamine 111-69-3, Hexanedinitrile 111-70-6, 1-Heptanol 111-76-2 111-83-1 111-86-4, 1-Octanamine 111-87-5, 1-Octanol, biological studies 111-90-0 111-91-1 111-96-6 112-00-5 112-05-0, Nonanoic acid 112-12-9, 2-Undecanone 112-18-5 112-20-9, 1-Nonanamine 112-24-3 112-27-6 112-30-1, 1-Decanol 112-34-5 112-42-5, 1-Undecanol 112-53-8, 1-Dodecanol 112-70-9, 1-Tridecanol 112-80-1, 9-Octadecenoic acid (9Z)-, biological studies 114-26-1 115-19-5 115-20-8 115-29-7 115-32-2 115-86-6 116-06-3 117-80-6 118-55-8 118-61-6 118-74-1 118-79-6 118-96-7 119-32-4 119-34-6 119-61-9, biological studies 120-07-0 120-21-8 120-62-7 120-80-9, 1,2-Benzenediol, biological studies 120-82-1 120-83-2 120-92-3, Cyclopentanone 121-14-2 121-32-4 121-33-5 121-48-2 121-54-0 121-57-3 121-69-7, biological studies 121-73-3 121-75-5 121-82-4 121-87-9 122-03-2 122-14-5 122-39-4, biological studies 122-99-6 123-07-9 123-15-9 123-31-9, 1,4-Benzenediol, biological studies 123-42-2 123-54-6, 2,4-Pentanedione, biological studies 123-66-0 123-72-8, Butanal 123-86-4 123-91-1, 1,4-Dioxane, biological studies 124-04-9, Hexanedioic acid, biological studies 124-22-1, 1-Dodecanamine 124-25-4, Tetradecanal 125-12-2 126-73-8, Phosphoric acid tributyl ester, biological studies 126-81-8 126-99-8 127-00-4 127-06-0 127-18-4, biological studies 127-20-8 127-65-1 127-66-2 128-37-0, biological studies 128-44-9 129-67-9 131-11-3 131-52-2 132-64-9, Dibenzofuran 133-06-2 133-07-3 133-11-9 134-62-3 135-19-3, 2-Naphthalenol, biological studies 137-30-4 137-40-6 140-31-8, 1-Piperazineethanamine 140-88-5 141-03-7 141-28-6 141-43-5, biological studies 141-78-6, Acetic acid ethyl ester, biological studies 141-91-3 141-93-5 141-97-9 142-28-9 142-62-1, Hexanoic acid, biological studies 142-71-2 142-92-7 142-96-1 143-08-8, 1-Nonanol 143-16-8 143-33-9, Sodium cyanide (Na(CN)) 143-50-0 148-18-5 148-53-8 150-19-6 150-76-5 150-78-7 151-21-3, biological studies 152-16-9 253-52-1, Phthalazine 260-94-6, Acridine 271-89-6, Benzofuran 275-51-4, Azulene 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 281-23-2, Tricyclo[3.3.1.13,7]decane 298-00-0 298-02-2 298-03-3 298-04-4 299-84-3 300-76-5 309-00-2 309-43-3 311-45-5 314-40-9 315-18-4 327-98-0 329-71-5 330-54-1 330-93-8 333-41-5 350-46-9

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (using fragment chem. data mining and probabilistic neural networks in screening chems. for acute toxicity to fathead minnow)

IT 368-77-4 371-40-4 383-63-1 385-00-2 387-45-1 393-39-5 446-52-6
 447-60-9 454-89-7 459-59-6 464-45-9 464-48-2 470-82-6 471-77-2
 475-20-7 496-16-2 497-37-0 498-66-8, Bicyclo[2.2.1]hept-2-ene
 499-83-2, 2,6-Pyridinedicarboxylic acid 500-22-1,
 3-Pyridinecarboxaldehyde 500-28-7 502-56-7, 5-Nonanone 506-96-7,
 Acetyl bromide 512-56-1 513-81-5 514-10-3 525-82-6 527-60-6
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 592-46-1, 2,4-Hexadiene 592-85-8 593-08-8, 2-Tridecanone 596-85-0
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 768-94-5, Tricyclo[3.3.1.13,7]decan-1-amine 769-28-8 771-60-8
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 3,6,9,12,15,18-Hexaoxatriacontan-1-ol 3055-99-0 3056-00-6 3066-71-5
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RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (using fragment chem. data mining and probabilistic neural networks in
 screening chems. for acute toxicity to fathead minnow)

IT 3389-71-7 3428-24-8 3481-20-7 3558-69-8 3689-24-5 3698-83-7
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 69723-94-0 69770-23-6 70124-77-5 70343-06-5 79124-76-8
 92669-00-6 186817-80-1 207385-33-9 768377-98-6 768377-99-7
 768378-00-3 768378-01-4

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (using fragment chem. data mining and probabilistic neural networks in
 screening chems. for acute toxicity to fathead minnow)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

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REFERENCE 3

AN 140:124585 CA
 TI Assessment of photodynamic destruction of *Escherichia coli* O157:H7 and
Listeria monocytogenes by using ATP bioluminescence
 AU Romanova, N. A.; Brovko, L. Y.; Moore, L.; Pometun, E.; Savitsky, A. P.;
 Ugarova, N. N.; Griffiths, M. W.
 CS Canadian Research Institute for Food Safety, University of Guelph, Guelph,
 ON, Can.
 SO Applied and Environmental Microbiology (2003), 69(11), 6393-6398
 CODEN: AEMIDF; ISSN: 0099-2240
 PB American Society for Microbiology
 DT Journal
 LA English
 CC 8-9 (Radiation Biochemistry)
 AB Antimicrobial photodynamic therapy was shown to be effective against a wide range of bacterial cells, as well as for fungi, yeasts, and viruses. It was shown previously that photodestruction of yeast cells treated with photosensitizers resulted in cell destruction and leakage of ATP. Three photosensitizers were used in this study: tetra(N-methyl-4-pyridyl)porphine tetratosylate salt (TMPyP), toluidine blue O (TBO), and methylene blue trihydrate (MB). A microdilution method was used to det. MICs of the photosensitizers against both *Escherichia coli* O157:H7 and *Listeria monocytogenes*. To evaluate the effects of photodestruction on *E. coli* and *L. monocytogenes* cells, a bioluminescence method for detection of ATP leakage and a colony-forming assay were used. All tested photosensitizers were effective for photodynamic destruction of both bacteria. The effectiveness of photosensitizers (in microgram-per-milliliter equiv.) decreased in the order TBO > MB > TMPyP for both organisms. The MICs were two- to fourfold higher for *E. coli* O157:H7 than for *L. monocytogenes*. The primary effects of all of the photosensitizers tested on live bacterial cells were a decrease in intracellular ATP and an increase in extracellular ATP, accompanied by elimination of viable cells from the sample. The time courses of photodestruction and intracellular ATP leakage were different for *E. coli* and *L. monocytogenes*. These results show that bioluminescent ATP-metry can be used for investigation of the first stages of bacterial photodestruction.
 ST ATP bioluminescence detection photodynamic destruction *Escherichia coli* *Listeria monocytogenes*
 IT Biomarkers
 (ATP, leakage, as cell death indicator; photodynamic destruction of *Escherichia coli* and *Listeria monocytogenes*: ATP bioluminescence detection of first stages of bacterial photodestruction)
 IT Cell death
 (photodestruction; photodynamic destruction of *Escherichia coli* and *Listeria monocytogenes*: ATP bioluminescence detection of first stages of bacterial photodestruction)
 IT Antimicrobial agents

Escherichia coli
 Listeria monocytogenes
 Luminescence, bioluminescence
 Photodynamic therapy
 Photosensitizers, pharmaceutical
 (photodynamic destruction of Escherichia coli and Listeria
 monocytogenes: ATP bioluminescence detection of first stages of
 bacterial photodestruction)

IT 56-65-5, Atp, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (leakage, as indicator of cell death; photodynamic destruction of
 Escherichia coli and Listeria monocytogenes: ATP bioluminescence
 detection of first stages of bacterial photodestruction)

IT 92-31-9, Toluidine blue O 7220-79-3, Methylene blue trihydrate 36951-7
 2-1
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (photodynamic destruction of Escherichia coli and Listeria
 monocytogenes: ATP bioluminescence detection of first stages of
 bacterial photodestruction)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

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REFERENCE 4

AN 139:343517 CA
 TI Coating formulations for limited play data storage media
 IN Ezbiansky, Karin Ann; Olson, Daniel Robert; Wisnudel, Marc Brian;
 Lindholm, Edward P.
 PA General Electric Company, USA; Flexplay Technologies, Inc.
 SO PCT Int. Appl., 46 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C09D005-00
 ICS C09D201-00; G11B007-24
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 38, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003089528	A2	20031030	WO 2003-US12419	20030422
	WO 2003089528	A3	20040226		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2004014859	A1	20040122	US 2003-417991	20030417

AU 2003228640	A1	20031103	AU 2003-228640	20030422
EP 1500097	A2	20050126	EP 2003-726401	20030422
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005523367	T2	20050804	JP 2003-586243	20030422
PRAI US 2002-374353P		20020422		
US 2003-417991		20030417		
WO 2003-US12419		20030422		
AB	A coating formulation for limited play storage media is provided which comprises at least one polyhydroxy compd.; at least one carrier; and at least one reactive material.			
ST	coating formulation limited play optical data storage media			
IT	Coating materials			
	Optical recording (coating formulations for limited play data storage media)			
IT	Epoxy resins, uses			
	Polyesters, uses			
	Polyurethanes, uses			
	RL: TEM (Technical or engineered material use); USES (Uses) (coating formulations for limited play data storage media contg.)			
IT	Plastics, uses			
	RL: TEM (Technical or engineered material use); USES (Uses) (thermoplastics; coating formulations for limited play data storage media contg.)			
IT	4712-70-3			
	RL: TEM (Technical or engineered material use); USES (Uses) (Brilliant Cresyl Blue; coating formulations for limited play data storage media contg.)			
IT	92-31-9, Toluidine Blue O 92-88-6, 4,4'-Biphenol 128-37-0, Di-tert-butyl-4-methyl phenol, uses 613-11-6, Leuco methylene blue 2417-04-1 7220-79-3, Methylene blue trihydrate 9011-14-7, Elvacite 2008 10344-93-1, Acrylate, uses 55840-82-9, Basic blue 3 RL: TEM (Technical or engineered material use); USES (Uses) (coating formulations for limited play data storage media contg.)			

REFERENCE 5

AN	137:255449 CA
TI	Limited play data storage media and method for limiting access to optical disks data
IN	Breitung, Eric M.; Van Hamersveld, Eelco M. S.; Olson, Daniel Robert; Wisnudel, Marc Brian
PA	General Electric Company, USA
SO	PCT Int. Appl., 37 pp. CODEN: PIXXD2
DT	Patent
LA	English
IC	ICM G11B007-24
CC	74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002075733	A1	20020926	WO 2002-US5050	20020206
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US	2003002431	A1	20030102	US 2001-681288	20010314
US	6733950	B2	20040511		
EP	1371059	A1	20031217	EP 2002-753595	20020206
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN	1496563	A	20040512	CN 2002-806642	20020206
JP	2004528667	T2	20040916	JP 2002-574661	20020206
TW	586111	B	20040501	TW 2002-91103850	20020301
US	2004152014	A1	20040805	US 2004-762712	20040121

US 6991889	B2	20060131		
US 2005129953	A1	20050616	US 2004-986611	20041112
PRAI US 2001-681288		20010314		
WO 2002-US5050		20020206		
US 2004-762712		20040121		

AB The present disclosure relates to a limited play optical storage media and a method for limiting access to data. This storage media comprises: an optically transparent substrate, reflective layer, data storage layer disposed between the substrate and the reflective layer; oxygen penetrable UV coating disposed on a side of the substrate opposite said data storage layer, and reactive layer disposed between said UV coating and said substrate, the reactive layer having an initial percent reflectivity of about 50% or greater and a subsequent percent reflectivity of about 45% or less. The invention provides a reliable method for limiting access to data on optical disks.

ST DVD protection coating intellectual property data limited access

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(di-Me polysiloxane-, BYK 301; limited play data storage media and method for limiting access to optical disks data)

IT Polysiloxanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(di-Me, polyoxyalkylene-, BYK 301; limited play data storage media and method for limiting access to optical disks data)

IT Optical disks

(limited play data storage media and method for limiting access to optical disks data)

IT Polycarbonates, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(limited play data storage media and method for limiting access to optical disks data)

IT 9011-14-7, Elvacite 2010

RL: TEM (Technical or engineered material use); USES (Uses)
(Elvacite 2008; limited play data storage media and method for limiting access to optical disks data)

IT 301-10-0, Stannous octanoate 1320-67-8, Dowanol PM 3144-16-9, Camphor sulfonic acid 7220-79-3, Methylene blue trihydrate 404889-20-9, Daicure SD 640

RL: TEM (Technical or engineered material use); USES (Uses)
(limited play data storage media and method for limiting access to optical disks data)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

- (1) Anon; www.matweb.com 2002
- (2) Ciba Geigy Ag; EP 0455585 A 1991 CAPLUS
- (3) Lackritz, H; US 5815484 A 1998
- (4) Quixote Corp; WO 9811539 A 1998

REFERENCE 6

AN 131:35909 CA
 TI Photopolymerizable dental compositions containing photofading dyes
 IN Fuchigami, Satoru; Kazama, Hideki; Iijima, Kuniyoshi
 PA Tokuyama K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM A61K006-08
 CC 63-7 (Pharmaceuticals)
 Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11139920	A2	19990525	JP 1997-304117	19971106
PRAI JP 1997-304117		19971106		

AB The compns., useful as bonding materials in dental restoration, contain radically-polymerizable monomers, .alpha.-diketones photopolymn. catalysts, and dyes which fade upon light irradn. The compns. remain no colored line at the margin and fading of color indicates the termination of curing. A compn. contg. 11-methacryloyloxyundecane-1,1-dicarboxylic acid, 2,2-bis[4-(3-methacryloyloxy-2-hydroxypropoxy)phenyl]propane, triethylene glycol dimethacrylate, 2-hydroxyethyl methacrylate,

camphorquinone, p-Me2NC6H4CO2Et, and methylene blue trihydrate was applied to a bovine tooth sample, and partly irradiated with visible light. Color of the irradiated area was clearly distinguished from the nonirradiated area. Bonding strength of the compn. for a primer-coated tooth sample and a composite resin was also sufficient.

ST photopolymerizable dental polymer compn photofading dye; methylene blue photofading photopolymerizable dental compn; bonding agent dental photocurable photofading dye

IT Ketones, uses
 RL: CAT (Catalyst use); USES (Uses)
 (1,2-diketones, photopolymer catalysts; photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT Dental materials and appliances
 (bonding agents; photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT Fading
 (photochem.; photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT Dyes
 (photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT Polymerization catalysts
 (photopolymer, radical; photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT Dental materials and appliances
 (resins; photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT 10373-78-1, Camphorquinone
 RL: CAT (Catalyst use); USES (Uses)
 (photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT 106209-59-0P 108362-86-3P
 RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

IT 553-24-2, Neutral red 7220-79-3, Methylene blue trihydrate 11121-48-5, Rose bengal 16423-68-0, Erythrosin
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (photopolymerizable dental compns. contg. photofading dyes to indicate termination of curing)

REFERENCE 7

AN 123:12052 CA
 TI Water soluble water washable crayon composition
 IN Lytton, Richard N.
 PA La-Co Industries, Inc., USA
 SO U.S., 7 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C09D013-00
 NCL 106-19B
 CC 42-12 (Coatings, Inks, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5380357	A	19950110	US 1993-101919	19930804
	WO 9504785	A1	19950216	WO 1994-US8611	19940801
		W:	AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, UZ, VN		
		RW:	BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
	AU 9473754	A1	19950228	AU 1994-73754	19940801
	FR 2708618	A1	19950210	FR 1994-9722	19940804
PRAI	US 1993-101919	19930804			
	WO 1994-US8611	19940801			
AB	The title crayon compn. comprises .gtoreq.1 ethoxylated alc.; optionally, .gtoreq.1 water sol. material selected from the group consisting of an ethoxylated sorbitan fatty acid ester, ester derivs. thereof, phenols and				

polymeric derivs.; >1 pigment or dye; and, optionally, .gtoreq.1 filler. The improved crayon compn. does not contain polyethylene glycols and, thus, exhibits little or no ghosting or residue left on a surface when washed with water; as well as non-toxicity, suitable hardness and durability, excellent adhesion and drawability, little or no stickiness after hardening and mold release, a higher softening temp. than a typical wax crayon, and low viscosity in a liq. state at elevated temps. for ease in shaping with molds.
 ST ethoxylated alc water sol crayon; sorbitan ester ethoxylate water sol crayon; pigmented water sol washable crayon
 IT Alcohols, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (C30-50, ethoxylated, water sol. water washable crayon compn. contg.)
 IT Coloring materials
 (crayons, water-sol. water washable; crayon compn. contg. ethoxylated alc., pigment, water sol. compd., and filler)
 IT 25322-68-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (mixt. with other water sol. compd.; water sol. water washable crayon compn. contg.)
 IT 471-34-1, Calcium carbonate, uses 1338-41-6 1343-88-0, Magnesium silicate 5281-04-9, D And C Red No. 7 7220-79-3 9002-88-4 9003-11-6 9005-65-6 13463-67-7, Titanium dioxide, uses 15876-58-1, D And C Red 28 aluminum lake
 RL: TEM (Technical or engineered material use); USES (Uses)
 (water sol. water washable crayon compn. contg.)

REFERENCE 8

AN 121:98754 CA
 TI Oxygen-detecting compositions
 IN Ogishima, Hiroaki
 PA Freunt Ind Co Ltd, Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM G01N031-22
 ICS A23L003-358; G01N021-78; G01N031-00
 CC 79-5 (Inorganic Analytical Chemistry)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 05312799	A2	19931122	JP 1991-247491	19910926
PRAI JP 1991-247491		19910926		
AB	The compn. contains a hydrotalcite, redox dye, and reducing sugar. The oxygen-detection limit, waterproofing, and color change of oxygen-detecting compns. are improved.			
ST	oxygen detection compn; hydrotalcite oxygen detection compn; redox dye oxygen detection compn; reducing sugar oxygen detection compn			
IT	Dyes (redox, oxygen-detecting compns. contg.)			
IT	Carbohydrates and Sugars, analysis RL: ANST (Analytical study) (reducing, oxygen-detecting compns. contg.)			
IT	7782-44-7, Oxygen, analysis RL: ANT (Analyte); ANST (Analytical study) (detection of, compn. contg. hydrotalcite and redox dye and reducing sugar for)			
IT	64-17-5, Ethanol, analysis 64-19-7, Acetic acid, analysis 124-38-9, Carbon dioxide, analysis RL: ANST (Analytical study) (oxygen detection in presence of, oxygen-detecting compns. for)			
IT	7220-79-3, Methylene blue trihydrate 12304-65-3, Hydrotalcite $(\text{Mg}_6(\text{CO}_3)_2[\text{Al}(\text{OH})_6]_2(\text{OH})_4 \cdot 4\text{H}_2\text{O})$ 156579-28-1 RL: ANST (Analytical study) (oxygen-detecting compns. contg.)			

REFERENCE 9

AN 110:31468 CA
 TI Photothermographic emulsions having stable color-forming developers

IN Mader, Roger A.; Weigel, David C.; Leichter, Louis M.; Hoff, Kristen A.
 PA Minnesota Mining and Manufacturing Co., USA
 SO 'Eur. Pat. Appl., 8 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM G03C001-02
 CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 28
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 273587	A2	19880706	EP 1987-310448	19871126
	EP 273587	A3	19890531		
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	US 4782010	A	19881101	US 1986-946969	19861229
	CA 1325914	A1	19940111	CA 1987-550064	19871023
	AU 8780585	A1	19880630	AU 1987-80585	19871102
	AU 600986	B2	19900830		
	JP 63187233	A2	19880802	JP 1987-328182	19871224
PRAI	US 1986-946969		19861229		
GI					

/ Structure 2 in file .gra /

AB A photothermog. dry Ag emulsion contains a developer of the formula I [R = OH, or when R3 = OH R may be H or combine with R1 or R2 form a fused benzene ring; R1, R2 = H, a substituent having a diam. at least as big as that of Br and equal or less than that 1,1,3,3,5,5-hexamethylhexyl or less than tertiary octyl, R1 and R2 may form a fused ring with R, or R2 may fuse with R3 to form a benzene ring; R3 = H, OH; R4 = H, alkyl, aryl, aralkyl, alkenyl; R5-R8 = H, alkyl, aryl; one of R5, R6 and one of R7 and R8 may be II; X = CO, SO2, carboxyl, amido, phosphoryl; Q = S, N, O, C; n = 0 for Q = S, 0; n = 1 for Q = N and n = 2 for Q = C]. The imaging system has improved storage stability.
 ST photothermog developer phenazine phenoxazine phenothiazine
 IT Photothermographic copying
 (color, color-forming developer from phenazine or phenoxazine or phenothiazine for)
 IT 79232-41-0P 114766-08-4P 118124-94-0P 118124-95-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and use of, as developer in photothermog. imaging system, for improved storage stability)
 IT 1734-00-5, 3-Hydroxy-2-naphthoyl chloride 7220-79-3, Methylene blue trihydrate 7775-14-6, Sodium dithionite 37060-36-9 40056-43-7
 118124-96-2 118124-97-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, photothermog. imaging system contg. developer from)

REFERENCE 10

AN 104:177429 CA
 TI Spectrofluorophotometric quantum counter dye for red to near infrared range measurement
 AU Ohtsuka, Masao; Itoh, Masakuni; Oikawa, Mitsuru; Oguchi, Masanobu
 CS Fac. Imaging Tech., Tokyo Inst. Polytech., Atsugi, 243-02, Japan
 SO Tokyo Kogei Daigaku Kogakubu Kiyo (1984), 7(1), 31-40
 CODEN: TOKIDC; ISSN: 0387-6055
 DT Journal
 LA Japanese
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 41
 AB Three thiocarbocyanines, 2 oxacarbocyanines, 3 methylene blues, and 3 phthalocyanines were studied for selection of a quantum counter dye which is suitable to use at 600-.apprx.700 nm. Methylene blue trihydrate (10-3 M in glycol) was selected from the view-point of fluorescent

characteristics and stability. Relations between fluorescent spectra of 3,3'-diethyl-(6,7,6',7'-dibenzo)thiadicarbocyanine bromide (10-6 M in EtOH), and exciting intensities (Xe-lamp current 20-25 A) of the spectrofluorophotometer using methylene blue as the quantum counter are presented as an example.

ST spectrofluorophotometer quantum counter dye
 IT Dyes
 Dyes, cyanine
 (for spectrofluorophotometer quantum counter)
 IT Optical detectors
 (quantum counters, evaluation of dyes for)
 IT Photometers
 (spectrofluoro-, dye evaluation as quantum counter for)
 IT Fluorometers
 (spectrofluorophotometer, evaluation of dyes as quantum counter for)
 IT 7220-79-3 51532-39-9
 RL: PRP (Properties)
 (fluorescent properties of, for use as spectrofluorophotometer quantum counter)

L6 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
 RN ***613-11-6*** REGISTRY
 ED Entered STN: 16 Nov 1984
 CN 10H-Phenothiazine-3,7-diamine, N,N,N',N'-tetramethyl- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN ***Leucomethylene blue (6CI)***
 CN Phenothiazine, 3,7-bis(dimethylamino)- (7CI, 8CI)
 OTHER NAMES:
 CN 3,7-Bis(dimethylamino)phenothiazine
 CN ***Leukomethylene blue***
 CN ***Methylene blue leuco base***
 CN ***Methylene blue leuco form***
 CN ***Methylene blue, leuco***
 CN ***Reduced methylene blue***
 FS 3D CONCORD
 MF C16 H19 N3 S
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMLIST, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 DT.CA CAplus document type: Conference; Journal; Patent; Report
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
 RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); USES (Uses)
 RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
 RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological study); PRP (Properties); USES (Uses)

Ring System Data

Elemental Analysis	Elemental Sequence	Size of the Rings	Ring System Formula	Ring Identifier	RID Occurrence
EA	ES	SZ	RF	RID	Count
C4NS-C6-C6	NC2SC2-C6-C6	6-6-6	C12NS	2508.272.18	1

/ Structure 3 in file .gra /

Experimental Property Tags (ETAG)

PROPERTY	NOTE
Proton NMR Spectra	(1) CAS

(1) Bhaduri, Sumit; Organometallics 2004 V23(15) P3733-3740 CAPLUS

Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF)	1.0	pH 1 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 2 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 3 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 4 25 deg C	(1)
Bioconc. Factor (BCF)	14.90	pH 5 25 deg C	(1)
Bioconc. Factor (BCF)	219.60	pH 6 25 deg C	(1)
Bioconc. Factor (BCF)	866.24	pH 7 25 deg C	(1)
Bioconc. Factor (BCF)	1179.54	pH 8 25 deg C	(1)
Bioconc. Factor (BCF)	1223.29	pH 9 25 deg C	(1)
Bioconc. Factor (BCF)	1227.84	pH 10 25 deg C	(1)
Boiling Point (BP)	491.7+-45.0 deg C	760 Torr	(1)
Density (DEN)	1.201+-0.06 g/cm**3	760 Torr	(1)
Enthalpy of Vap. (HVAP)	75.85+-3.0 kJ/mol	760 Torr	(1)
Flash Point (FP)	251.2+-28.7 deg C		(1)
Freely Rotatable Bonds (FRB)	2		(1)
H acceptors (HAC)	3		(1)
H donors (HD)	1		(1)
Hydrogen Donors/Acceptors Sum (HDAS)	4		(1)
Koc (KOC)	1.79	pH 1 25 deg C	(1)
Koc (KOC)	1.80	pH 2 25 deg C	(1)
Koc (KOC)	1.93	pH 3 25 deg C	(1)
Koc (KOC)	3.98	pH 4 25 deg C	(1)
Koc (KOC)	68.64	pH 5 25 deg C	(1)
Koc (KOC)	1011.51	pH 6 25 deg C	(1)
Koc (KOC)	3990.00	pH 7 25 deg C	(1)
Koc (KOC)	5433.10	pH 8 25 deg C	(1)
Koc (KOC)	5634.65	pH 9 25 deg C	(1)
Koc (KOC)	5655.60	pH 10 25 deg C	(1)
logD (LOGD)	0.87	pH 1 25 deg C	(1)
logD (LOGD)	0.87	pH 2 25 deg C	(1)
logD (LOGD)	0.90	pH 3 25 deg C	(1)
logD (LOGD)	1.22	pH 4 25 deg C	(1)
logD (LOGD)	2.45	pH 5 25 deg C	(1)
logD (LOGD)	3.62	pH 6 25 deg C	(1)
logD (LOGD)	4.22	pH 7 25 deg C	(1)
logD (LOGD)	4.35	pH 8 25 deg C	(1)
logD (LOGD)	4.37	pH 9 25 deg C	(1)
logD (LOGD)	4.37	pH 10 25 deg C	(1)
logP (LOGP)	4.368+-1.039	25 deg C	(1)
Mass Intrinsic Solubility (ISLB.MASS)	0.0037 g/L	25 deg C	(1)
Mass Solubility (SLB.MASS)	11 g/L	pH 1 25 deg C	(1)
Mass Solubility (SLB.MASS)	11 g/L	pH 2 25 deg C	(1)
Mass Solubility (SLB.MASS)	11 g/L	pH 3 25 deg C	(1)
Mass Solubility (SLB.MASS)	5.1 g/L	pH 4 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.31 g/L	pH 5 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.021 g/L	pH 6 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.0051 g/L	pH 7 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.0037 g/L	pH 8 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.0037 g/L	pH 9 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.0037 g/L	pH 10 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.0040 g/L	Unbuffered Water	(1)
		pH 7.87	
		25 deg C	
Molar Intrinsic Solubility (ISLB.MOL)	0.000013 mol/L	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.040 mol/L	pH 1 25 deg C	(1)

Molar Solubility (SLB.MOL)	0.040 mol/L	pH 2	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.038 mol/L	pH 3	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.018 mol/L	pH 4	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.0011 mol/L	pH 5	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000072 mol/L	pH 6	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000018 mol/L	pH 7	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000013 mol/L	pH 8	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000013 mol/L	pH 9	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000013 mol/L	pH 10	25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000014 mol/L	Unbuffered Water		(1)
		pH 7.87		
		25 deg C		
Molar Volume (MVOL)	237.5+-3.0 cm**3/mol	20 deg C		(1)
		760 Torr		
Molecular Weight (MW)	285.41			(1)
pKa (PKA)	6.62+-0.20	Most Basic		(1)
		25 deg C		
Polar Surface Area (PSA)	43.81 A**2			(1)
Vapor Pressure (VP)	8.16E-10 Torr	25 deg C		(1)

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14
((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

245 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

245 REFERENCES IN FILE CAPLUS (1907 TO DATE)

40 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1

AN 144:241801 CA
TI Influence of cationic surfactants on the voltammetric behavior of methylene blue at a silver electrode
AU Zhao, Jia; Zhao, Faqiong; Chen, Zhiyao; Zeng, Baizhao
CS Department of Chemistry, Wuhan University, Wuhan, 430072, Peop. Rep. China
SO Electroanalysis (2005), 17(12), 1071-1077
CODEN: ELANEU; ISSN: 1040-0397
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
CC 72-2 (Electrochemistry)
Section cross-reference(s): 22, 41, 66
AB The voltammetric behavior of methylene blue (MB, or MB+ in soln.) at a Ag electrode was studied. MB+ can exhibit a cathodic peak at .apprx.-0.2 V (vs. SCE), while the electrogenerated LMB (leucomethylene blue) exhibits an anodic peak at almost the same potential in neutral phosphate buffer. In the presence of some surfactants such as cetyltrimethylammonium bromide (CTAB), cetylpyridinium bromide (CPB) and gemini surfactant butyl-.alpha..omega.-bis(dimethylcetylammonium bromide) (C16-C4-C16), the peaks, specially the anodic peak, become higher and shift to more pos. potentials. This results from the assocd. adsorption or surface complexation of LMB/MB+ with adsorbed surfactants. Surfactants with same alkyl chain (i.e., -(CH₂)₁₅Me) but different mol. structure, show different influence due to their different adsorbability and hydrophobicity. C16-C4-C16, bearing 2 hydrophobic alkyl chains, makes the MB peaks occur at more pos. potentials, while CPB makes the peaks grow more rapidly. Dihexadecyldimethylammonium bromide (DCAB), showing weaker adsorption under this conditions, has little influence on the peak height of MB. The influence of other factors is discussed as well.
ST cationic surfactant effect cyclic voltammetry methylene blue silver electrode
IT Surfactants
(cyclic voltammetry of methylene blue at silver electrode in phosphate buffer soln. contg. surfactants)
IT Cyclic voltammetry
Reduction, electrochemical
(of methylene blue at silver electrode in phosphate buffer soln. contg. surfactants)
IT Adsorption
(of surfactants by silver electrode and cyclic voltammetry of methylene

blue at silver electrode in phosphate buffer soln. contg. surfactants)
 IT 61-73-4, Methylene blue
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (cyclic voltammetry at silver electrode in phosphate buffer soln. contg. surfactants)
 IT 7440-22-4, Silver, uses
 RL: DEV (Device component use); USES (Uses)
 (cyclic voltammetry of methylene blue at silver electrode in phosphate buffer soln. contg. surfactants)
 IT 57-09-0, Cetyltrimethylammonium bromide 140-72-7, Cetylpyridinium bromide 29908-17-6 70755-47-4, Dihexadecyldimethylammonium bromide 175917-23-4 696644-56-1
 RL: NUU (Other use, unclassified); USES (Uses)
 (cyclic voltammetry of methylene blue at silver electrode in phosphate buffer soln. contg. surfactants of)
 IT 613-11-6, Leucomethylene blue
 RL: CPS (Chemical process); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process)
 (electrochem. reductive formation at silver electrode in phosphate buffer soln. contg. surfactants and cyclic voltammetry of methylene blue in presence of surfactants)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

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REFERENCE 2

AN 144:99160 CA
 TI Electrolytically recoverable etching solution
 IN Nehdi, Sadok Ben Rejeb
 PA ELO-Chem CSM GmbH, Germany
 SO PCT Int. Appl., 14 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM C23F001-34
 ICS C23F001-46; H05K003-06
 CC 76-3 (Electric Phenomena)
 Section cross-reference(s): 56

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2006000364 A1 20060105 WO 2005-EP6622 20050620
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG,
NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,
KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, TM

DE 102004030924 A1 20060119 DE 2004-10200403092420040625
PRAI DE 2004-102004030924 20040625

AB The invention relates to an electrolytically recoverable etching soln., esp. for etching of printed circuit boards and molded parts from Cu and Cu alloys. The etching soln. essentially consists of water, NH4OH, CuSO4, (NH4)2SO4, and optionally a V-contg. catalyst for increasing the etching rate. The etching soln. also contains methylene blue or its derivs. as an addnl. catalyst.

ST etching soln printed circuit board

IT Etching

(electrolytically recoverable etching soln.)

IT Printed circuit boards

(electrolytically recoverable etching soln. for)

IT copper alloy, base

RL: TEM (Technical or engineered material use); USES (Uses)

(electrolytically recoverable etching soln. for)

IT 7440-50-8, Copper, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(electrolytically recoverable etching soln. for)

IT 61-73-4, Methylene blue 613-11-6

RL: CAT (Catalyst use); USES (Uses)

(in electrolytically recoverable etching soln. for printed circuit boards)

IT 1314-62-1, Vanadium pentoxide, uses 1336-21-6, Ammonium hydroxide

7758-99-8, Copper sulfate pentahydrate 7783-20-2, Ammonium sulfate, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(in electrolytically recoverable etching soln. for printed circuit boards)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

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(5) Zimmermann, M; US 3257160 A 1966

REFERENCE 3

AN 144:42237 CA

TI Adsorptive and stripping behavior of methylene blue at gold electrodes in the presence of cationic gemini surfactants

AU Li, Jiangwen; Zhao, Faqiong; Zhao, Jia; Zeng, Baizhao

CS Department of Chemistry, Wuhan University, Wuhan, 430072, Peop. Rep. China

SO Electrochimica Acta (2005), 51(2), 297-303

CODEN: ELCAAV; ISSN: 0013-4686

PB Elsevier B.V.

DT Journal

LA English

CC 72-2 (Electrochemistry)

Section cross-reference(s): 41, 66, 80

AB The adsorptive and stripping behavior of methylene blue (i.e. methylene blue chloride, MB) at a Au electrode was studied with voltammetry, a.c. impedance spectra (ACIS) and quartz crystal microbalance (QCM). MB exhibits a pair of cyclic voltammetry peaks at .apprx.-0.3 V (vs. SCE) in 0.05M pH 6.9 phosphate buffer solns. In the presence of cationic gemini surfactants such as C16H33NMe2-C4H8-NMe2C16H33Br2 (C16-C4-C16), C16H33NMe2-C4H7OH-NMe2C16H33Br2 (C16-C4OH-C16), C16H33NMe2-CH2-C6H4-CH2-NMe2C16H33Br2 (C16-ph-C16) and C16H33NMe2-C12H24-NMe2C16H33Br2 (C16-C12-C16), the anodic peak grows rapidly and moves in pos. direction, but the cathodic peak gradually decreases, due to the assocn. adsorption

and electrostatic interaction of the geminis with MB and its reduced product (i.e. leukomethylene blue, LMB). With the aid of geminis the adsorption amt. of MB increases under open-circuit, but the impedance of the mixed adsorption film to $\text{Fe}(\text{CN})_6^{3-/-4-}$ almost keeps unchanged, compared with either bare Au electrodes or MB film, while the adsorption film of geminis exhibits greater impedance. This behavior probably is due to the electron medium action of MB in the film. Gemini surfactants with same alkyl-chain (i.e. $-(\text{CH}_2)_{15}\text{Me}$) but different mol. structure, exhibit different influence. The enhancing action of geminis studied follows such order as: C16-*ph*-C16 > C16-C4-C16 > C16-C4OH-C16 > C16-C12-C16. The change of peak potential is ascribed to the interaction between MB and surfactants, as well as the blocking action of surfactant film. For comparison, the influence of dihexadecyldimethylammonium bromide (DCAB) and cetyltrimethylammonium bromide (CTAB) was studied, and the influence of other factors is discussed as well.

ST adsorptive stripping behavior methylene blue gold electrode cationic surfactant

IT Surfactants (cationic, gemini; cyclic voltammetry and adsorptive and stripping behavior of methylene blue at gold electrodes in presence of cationic gemini surfactants)

IT Electric impedance (of gold electrode in KNO_3 soln. contg. cyanoferates and methylene blue with and without cationic gemini surfactants)

IT Adsorption

Cyclic voltammetry

Reduction, electrochemical (of methylene blue at gold electrodes in presence of cationic gemini surfactants)

IT 57-09-0, Cetyltrimethylammonium bromide 70755-47-4, Dihexadecyldimethylammonium bromide

RL: NUU (Other use, unclassified); USES (Uses) (adsorptive and stripping behavior of methylene blue at gold electrodes in presence of cationic gemini surfactants and comparison with)

IT 61-73-4, Methylene blue

RL: ANT (Analyte); CPS (Chemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); ANST (Analytical study); PROC (Process) (cyclic voltammetry and adsorptive and stripping behavior of methylene blue at gold electrodes in presence of cationic gemini surfactants)

IT 7440-57-5, Gold, uses

RL: DEV (Device component use); USES (Uses) (cyclic voltammetry and adsorptive and stripping behavior of methylene blue at gold electrodes in presence of cationic gemini surfactants)

IT 29908-17-6 150324-77-9 175917-23-4 696644-56-1

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses) (cyclic voltammetry and adsorptive and stripping behavior of methylene blue at gold electrodes in presence of cationic gemini surfactants)

IT 13746-66-2, Potassium ferricyanide 13943-58-3, Potassium ferrocyanide

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process) (elec. impedance of gold electrode in KNO_3 soln. contg. cyanoferates and methylene blue with and without cationic gemini surfactants)

IT 613-11-6, Leukomethylene blue

RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative) (formation in methylene blue electrochem. redn. and adsorptive and stripping behavior of methylene blue at gold electrodes in presence of cationic gemini surfactants)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- (23) Zhao, G; *Anal Chim Acta* 1999, V394, P337 CAPLUS
- (24) Zutic, V; *J Elelectroanal Chem* 1987, V219, P183 CAPLUS

REFERENCE 4

AN 144:8083 CA

TI oscillation redox processes in the leucomethylene blue-methylene blue system

AU Magomedbekov, U. G.; Ismailova, F. O.; Gasangadzhieva, U. G.; Magomedbekov, N. Kh.

CS Dagest. Gos. Univ., Russia

SO Izvestiya Vysshikh Uchebnykh Zavedenii, Severo-Kavkazskii Region, Estestvennye Nauki (2004), (3), 71-74
CODEN: IVUNE6; ISSN: 1026-2237

PB Rostovskii Gosuniversitet

DT Journal

LA Russian

CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

AB The oxidn.-redn. processes in the system of leucomethylene blue-methylene blue in homogeneous medium running in the presence of oxygenated complexes of iron(II) were studied. These processes have been found to run in oscillatory regime under certain conditions. The values of the dimensionalities of the phase space and attractor were detd. on the basis of the anal. of the exptl. time series.

ST leucomethylene blue oxidn oscillation iron oxygenate

IT Redox reaction
(oscillation redox processes in the leucomethylene blue-methylene blue system)

IT 73-24-5D, Adenine, oxygenated iron complexes 95-45-4D, Dimethylglyoxime, oxygenated iron complexes 7439-89-6D, Iron, oxygenated adenine and dimethylglyoxime complexes
RL: CAT (Catalyst use); USES (Uses)
(oscillation redox processes in the leucomethylene blue-methylene blue system)

IT 61-73-4, Methylene blue 613-11-6, Leucomethylene blue
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(oscillation redox processes in the leucomethylene blue-methylene blue system)

REFERENCE 5

AN 144:120 CA

TI Analysis of methylene blue in human urine by capillary electrophoresis

AU Borwitzky, Holger; Haefeli, Walter E.; Burhenne, Juergen

CS Department of Internal Medicine VI, Clinical Pharmacology and Pharmacoepidemiology, University of Heidelberg, Heidelberg, D-69120, Germany

SO *Journal of Chromatography, B: Analytical Technologies in the Biomedical and Life Sciences* (2005), 826(1-2), 244-251
CODEN: JCBAAI; ISSN: 1570-0232

PB Elsevier B.V.

DT Journal

LA English

CC 1-1 (Pharmacology)

AB A capillary electrophoresis method for the detn. of the dye methylene blue (tetramethylthionine, MB) in human urine depending on liq./liq.-extn. and diode array detection has been developed, validated, and applied to samples of healthy individuals, who had been dosed with methylene blue within clin. studies. After extn. with dichloromethane and sodium hexanesulfonate, sample exts. were measured on an extended light path

capillary. The dye was detected simultaneously at 292 and 592 nm using methylene violet 3 RAX as internal std. The limit of quantification was 1.0 $\mu\text{g/mL}$. The accuracy of the method varied between -15.2 and +0.8% and the precision ranged from 2.0 to 12.0%. The method was linear at least within 1.0 and 60 $\mu\text{g/mL}$. In contrast to earlier indirect detns. no leuco methylene blue (LMB) was directly detected in urine, whereas in aq. test solns. contg. surplus amts. of ascorbic acid leuco methylene blue was well sepd. from MB in a single run.

ST methylene blue detn capillary electrophoresis
 IT Capillary electrophoresis
 Human
 Urine analysis
 (anal. of methylene blue in human urine by capillary electrophoresis)
 IT 61-73-4, Methylene blue 613-11-6, Leuco methylene blue
 RL: ANT (Analyte); ANST (Analytical study)
 (anal. of methylene blue in human urine by capillary electrophoresis)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

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REFERENCE 6

AN 143:455004 CA
 TI Enzyme electrode response in solution containing enzyme substrate and species that associates with the substrate
 AU Mizutani, Fumio; Yabuki, Soichi; Sato, Yukari; Iijima, Seiichiro
 CS Hokkaido Center, National Institute of Advanced Industrial Science and Technology, Toyohira, Sapporo, 062-8517, Japan
 SO Sensors and Actuators, B: Chemical (2005), B108(1-2), 613-616
 CODEN: SABCEB; ISSN: 0925-4005
 PB Elsevier B.V.
 DT Journal
 LA English
 CC 9-1 (Biochemical Methods)
 Section cross-reference(s): 3
 AB An enzyme electrode response to the substrate (S) reduced by the addn. of a species (S') that form a complex with S: an S-S' complex formed was enzymically inactive and the complexation, of course, brought about the decrease in the free S-concn. This could be applied to the measurements of S in a high concn. range. For example, the addn. of a phenylboronic acid, which was known to form a complex with diols, to a conventional glucose oxidase (GOx)-based electrode system enabled to det. glucose up to 50 mM. Furthermore, the concn. of S' was detd. from the current decrease of the enzyme electrode: the concn. of DNA could be measured by using a peroxidase (HRP)-modified electrode and leuco-methylene blue (MBred),

which intercalated into DNA. In a soln. contg. methylene blue (MB) and hydrogen peroxide, a catalytic current was obtained on the HRP-modified electrode owing to the MB/MBred-recycling sequences. From the decrease of the catalytic current, the concn. of DNA (from salmon testes) was detd. with the detection limit of 5 ng ml-1.

ST enzyme electrode soln substrate species

IT Chemically modified electrodes

Enzyme electrodes

Salmon

Solutions

Testis

(enzyme electrode response in soln. contg. enzyme substrate and species that assocs. with the substrate)

IT DNA

RL: ANT (Analyte); ANST (Analytical study)

(enzyme electrode response in soln. contg. enzyme substrate and species that assocs. with the substrate)

IT Enzymes, uses

RL: ARG (Analytical reagent use); DEV (Device component use); ANST

(Analytical study); USES (Uses)

(enzyme electrode response in soln. contg. enzyme substrate and species that assocs. with the substrate)

IT 50-99-7, D-Glucose, analysis 7722-84-1, Hydrogen peroxide, analysis

RL: ANT (Analyte); ANST (Analytical study)

(enzyme electrode response in soln. contg. enzyme substrate and species that assocs. with the substrate)

IT 61-73-4, Methylene blue 98-80-6, Phenylboronic acid 613-11-6,

Leuco-methylene blue

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(enzyme electrode response in soln. contg. enzyme substrate and species that assocs. with the substrate)

IT 9001-37-0, Glucose oxidase 250777-10-7, Peroxidase, horseradish

RL: ARG (Analytical reagent use); DEV (Device component use); ANST

(Analytical study); USES (Uses)

(enzyme electrode response in soln. contg. enzyme substrate and species that assocs. with the substrate)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

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REFERENCE 7

AN 143:301546 CA

TI Electrochemical control of the photocurrent direction in intercalated DNA/CdS nanoparticle systems

AU Gill, Ron; Patolsky, Fernando; Katz, Eugenii; Willner, Itamar

CS Institute of Chemistry, The Hebrew University of Jerusalem, Jerusalem, 91904, Israel

<-----User Break----->

=> d kwic 2

L6 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN

RN ***613-11-6*** REGISTRY

OTHER CA INDEX NAMES:

CN ***Leucomethylene blue (6CI)***

OTHER NAMES:

CN ***Leukomethylene blue***

CN ***Methylene blue leuco base***

CN ***Methylene blue leuco form***

CN ***Methylene blue, leuco***
CN ***Reduced methylene blue***

=> d kwic

L6 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
RN ***7220-79-3*** REGISTRY
OTHER NAMES:
CN ***Methylene blue trihydrate***

=> s methylene(3a)blue
1480084 METHYLENE
3 METHYLENES
1480084 METHYLENE
(METHYLENE OR METHYLENES)
4983 BLUE
2 BLUES
4985 BLUE
(BLUE OR BLUES)
L7 59 METHYLENE(3A)BLUE

=> s triisopropyl? and 17
2602 TRIISOPROPYL?
L8 0 TRIISOPROPYL? AND L7

=> s tipsoclmb
0 TIPSOCLMB
L9 0 TIPSOCLMB

=> s (silane or silyl or silyloxycarbonyl) and 17
169188 SILANE
3 SILANES
169188 SILANE
(SILANE OR SILANES)
553553 SILYL
18 SILYLOXYCARBONYL
L10 0 (SILANE OR SILYL OR SILEYLOXYCARBONYL) AND L7

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=> s methylene(3a)blue
    121311 METHYLENE
    823 METHYLENES
    121805 METHYLENE
        (METHYLENE OR METHYLENES)
    247843 BLUE
    901 BLUES
    248229 BLUE
        (BLUE OR BLUES)
| L11    24609 METHYLENE(3A)BLUE

=> s (silane or silyl or silyloxycarbonyl) and l11
    82286 SILANE
    30904 SILANES
    94998 SILANE
        (SILANE OR SILANES)
    31207 SILYL
    52 SILYLS
    31225 SILYL
        (SILYL OR SILYLS)
    6 SILYLOXYCARBONYL
| L12    36 (SILANE OR SILYL OR SILYLOXYCARBONYL) AND L11

=> d all 1-36

| L12  ANSWER 1 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
| AN  2005:402276 CAPLUS
| DN  143:111747
| ED  Entered STN: 12 May 2005
| TI  Ultra-fast synthesis of magnetic and luminescent silica beads for
    versatile bioanalytical applications
| AU  Mueller-Schulte, Detlef; Schmitz-Rode, T.; Borm, Paul
| CS  MagnaMedics GmbH, Aachen, D-52066, Germany
| SO  Journal of Magnetism and Magnetic Materials (2005), 293(1), 135-143
    CODEN: JMMMD; ISSN: 0304-8853
| PB  Elsevier B.V.
| DT  Journal
| LA  English
| CC  9-1 (Biochemical Methods)
    Section cross-reference(s): 3
| AB  A method for the synthesis of both spherically shaped micro/nano silica
    particles and silica hybrid particles using a novel inverse sol-gel
    suspension technique was developed. The technique enables the synthesis
    of beads within seconds and provides a simple basis for quantum dot and
    biosubstances encapsulation. The carriers can be used as DNA adsorbents,
    individually addressable optical codes for bioassays and biomol. library
    screening as well as photonic crystals.
| ST  synthesis magnetic luminescent silica bead encapsulation adsorbent
    bioanalysis
| IT  Spheres
    (beads; ultra-fast synthesis of magnetic and luminescent silica beads
    for versatile bioanal. applications)
| IT  Yeast
    (cell, encapsulation of; ultra-fast synthesis of magnetic and
    luminescent silica beads for versatile bioanal. applications)
| IT  Cell
    (encapsulation of; ultra-fast synthesis of magnetic and luminescent
    silica beads for versatile bioanal. applications)
| IT  DNA
    RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
    (Uses)
    (encapsulation of; ultra-fast synthesis of magnetic and luminescent
    silica beads for versatile bioanal. applications)
| IT  ***Silanes***
    RL: CPS (Chemical process); PEP (Physical, engineering or chemical
    process); PROC (Process)
    (functionalized; ultra-fast synthesis of magnetic and luminescent
    silica beads for versatile bioanal. applications)
| IT  Proteins
    RL: NUU (Other use, unclassified); USES (Uses)
    (green fluorescent, encapsulation of; ultra-fast synthesis of magnetic
```

and luminescent silica beads for versatile bioanal. applications)

IT Encapsulation
 (nanoencapsulation; ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT Adsorbents
 Encapsulation
 Luminescence
 Magnetic particles
 Quantum dot devices
 Sol-gel processing
 (ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT 1306-24-7, Cadmium selenide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Zn-modified quantum dot, encapsulation of; ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT 7440-57-5, Gold, uses
 RL: NNU (Other use, unclassified); USES (Uses)
 (colloid, encapsulation of; ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT 61-73-4, ***Methylene*** ***blue*** 81-88-9, Rhodamine B
 2321-07-5, Fluorescein 7585-39-9, .beta.-Cyclodextrin 9002-89-5,
 Polyvinyl alcohol 9003-53-6, Polystyrene
 RL: NNU (Other use, unclassified); USES (Uses)
 (encapsulation of; ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT 7631-86-9, Silica, analysis
 RL: ARU (Analytical role, unclassified); CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); ANST (Analytical study); PROC (Process); USES (Uses)
 (ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT 2530-83-8, 3-Glycidyloxypropyltrimethoxy ***silane***
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT 7440-66-6, Zinc, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

IT 108-88-3, Toluene, uses 1332-37-2, Iron oxide, uses 26266-58-0, Span 85 66082-42-6, Prisorine 3700
 RL: TEM (Technical or engineered material use); USES (Uses)
 (ultra-fast synthesis of magnetic and luminescent silica beads for versatile bioanal. applications)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L12 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:173634 CAPLUS
 DN 143:208318
 ED Entered STN: 02 Mar 2005
 TI Study of the Nano-Size Silica Sol-Gel Film as the Matrix of Chemically Modified Electrode
 AU Tu, Yi-Feng; Di, Jun-Wei; Chen, Xiao-Jun
 CS College of Chemistry and Chemical Engineering, Suzhou University, Suzhou, 215006, Peop. Rep. China
 SO Journal of Sol-Gel Science and Technology (2005), 33(2), 187-191
 CODEN: JSGTEC; ISSN: 0928-0707
 PB Springer
 DT Journal
 LA English
 CC 9-1 (Biochemical Methods)
 AB This paper reports a new method to make the sol-gel film from silicate. It provided more profitable conditions than hydrolysis of alkoxyl ***silane*** to prep. the high-quality nanometers thin film. The thin film could be applied as the matrix to directly modify the mols. of ***methylene*** ***blue*** on electrode surface and kept their electrochem. activity excellently. It exhibited the remarkable catalytic activity for the oxidn. of NADH or redn. of Hb while severally embedding them in the sol-gel film together with ***methylene*** ***blue***.
 ST electrode silica sol gel film ***methylene*** ***blue*** ; ***methylene*** ***blue*** electrode nanotechnol NADH Hb
 IT Sol-gel processing (coating; nano-size silica sol-gel film as matrix chem.-modified electrodes)
 IT Chemically modified electrodes
 Films (nano-size silica sol-gel film as matrix chem.-modified electrodes)
 IT Cyclic voltammetry (nano-size silica sol-gel film as matrix ***methylene*** ***blue*** -modified electrodes)
 IT Oxidation (nano-size silica sol-gel film as matrix ***methylene*** ***blue*** -modified electrodes oxidizing coembedded NADH)
 IT Reduction (nano-size silica sol-gel film as matrix ***methylene*** ***blue*** -modified electrodes reducing coembedded Hb)
 IT Hemoglobins
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (nano-size silica sol-gel film as matrix ***methylene*** ***blue*** -modified electrodes reducing coembedded Hb)
 IT Technology (nanotechnol.; nano-size silica sol-gel film as matrix chem.-modified electrodes)
 IT Coating process (sol-gel; nano-size silica sol-gel film as matrix chem.-modified electrodes)
 IT 7631-86-9, Silica, analysis
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (nano-size silica sol-gel film as matrix chem.-modified electrodes)
 IT 61-73-4, ***Methylene*** ***blue***
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (nano-size silica sol-gel film as matrix ***methylene*** ***blue*** -modified electrodes)
 IT 58-68-4, NADH
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST

(Analytical study); USES (Uses)
(nano-size silica sol-gel film as matrix ***methylene***
blue -modified electrodes oxidizing coembedded NADH)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L12 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:1127245 CAPLUS

DN 142:79481

ED Entered STN: 24 Dec 2004

TI Process for preparing porous hybrid comprising zeolite and chitosan and porous hybrid prepared thereby

IN Yoon, Kyung Byung; Lee, Eun Ah; Jeon, Eun; Lee, Yun Jo

PA Sogang University Corporation, S. Korea

SO PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B01J020-18

CC 61-5 (Water)

Section cross-reference(s): 41, 60

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004110619	A1	20041223	WO 2004-KR1467	20040618

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI KR 2003-39691 A 20030619

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004110619	ICM	B01J020-18
	IPCI	B01J0020-18 [ICM,7]
	IPCR	B01J0020-10 [I,C]; B01J0020-18 [I,A]
	ECLA	B01J020/18B; B01J020/24; B01J039/14

AB The present invention relates to a process for prepg. a porous hybrid comprising zeolite and chitosan and a porous hybrid prepd. thereby, in particular, to a process for prepg. a porous chitosan-linking compd.-zeolite hybrid, which comprises the steps of: (a) forming a linking compd.-zeolite intermediate by linking a linking compd. to the surface of zeolite; and (b) prepg. said chitosan-linking compd.-zeolite hybrid by reacting said linking compd.- zeolite intermediate with chitosan or a linking compd.-chitosan, a porous hybrid prepd. thereby, an adsorbent and a method for purifying water. The porous chitosan-linking compd.-zeolite hybrid is capable of removing both cationic substances including heavy metals and anionic substances present in polluted water or wastewater.

ST prepn crosslinked chitosan zeolite wastewater water treatment
IT Wastewater treatment
Water purification
(adsorption; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT ***Silanes***
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(alkoxy, as linking compd.; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Wastewater treatment
(decolorization; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Wastewater treatment
Water purification
(filtration; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT ***Silanes***
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(halosilanes, as linking compd.; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Wastewater treatment
Water purification
(ion exchange, of both cations and anions; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Functional groups
(isocyanato group, compds. with, as linking compd.; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Cellular materials
Crosslinking
Crosslinking agents
(process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Heavy metals
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT A zeolites
Y zeolites
Zeolites (synthetic), uses
RL: TEM (Technical or engineered material use); USES (Uses)
(process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Heat treatment
(to form covalent bonds between functional groups; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Freeze drying
(to transform to sponge-form; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT Molecular sieves
(zeotype; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT 547-58-0, Methyl orange
RL: REM (Removal or disposal); PROC (Process)
(as anionic dye, adsorption of; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT 61-73-4, ***Methylene*** ***blue***
RL: REM (Removal or disposal); PROC (Process)
(as cationic dye, adsorption of; process for producing porous chitosan-linking compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT 107-02-8, Acrolein, uses 111-30-8, Glutaraldehyde 298-12-4, Glyoxylic acid 623-27-8, 1,4-Benzenedicarboxaldehyde 13822-56-5, Aminopropyl

trimethoxysilane
RL: TEM (Technical or engineered material use); USES (Uses)
 (as crosslinking agent; process for producing porous chitosan-linking
 compd.-zeolite hybrid, and its use in water or wastewater treatment)
IT 9012-76-4, Chitosan
RL: TEM (Technical or engineered material use); USES (Uses)
 (process for producing porous chitosan-linking compd.-zeolite hybrid,
 and its use in water or wastewater treatment)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(2) Asahi Glass Co Ltd; JP 1989040501 A 1989
(3) The Procter & Gamble Company; US 20030022574 A1 2003
(4) Yoon, K; WO 0196106 A1 2001 CAPLUS

L12 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:895201 CAPLUS
DN 142:302609
ED Entered STN: 27 Oct 2004
TI Solar energy utilization in degradation of 2-chlorophenol by immobilized
photosensitizers
AU Gryglik, D.; Miller, J. S.; Ledakowicz, S.
CS Department of Bioprocess Engineering, Faculty of Process and Environmental
Engineering, Technical University of Lodz, Lodz, 93005, Pol.
SO Solar Energy (2004), 77(5), 615-623
CODEN: SRENA4; ISSN: 0038-092X
PB Elsevier Ltd.
DT Journal
LA English
CC 60-2 (Waste Treatment and Disposal)
Section cross-reference(s): 67, 74
AB Photosensitized oxidn. of 2-chlorophenol using solar light was examd.
Rose bengal, ***methylene*** ***blue***, and chlorin e6 were used
as sensitizers. They were immobilized in the ***silane*** gel and
used in the form of a thin film covering glass plates. In some lab-scale
expts. Xe arc lamps were used as solar simulators. The influence of
various exptl. conditions (light intensity, the amt. of sensitizer, O
concn.) on the rate of 2-chlorophenol degrdn. was investigated. The
results indicate a possibility of the application of solar radiation in
the middle latitudes for wastewater treatment. The use of ***silane***
gel as a carrier for the sensitizer enables the pollutants removal at a
higher rate than in a homogeneous system. The stability and durability of
immobilized sensitizers were also studied.
ST photosensitized oxidn solar chlorophenol wastewater immobilized
photosensitizer
IT Sol-gel processing
 (coating; removal of 2-chlorophenol from aq. soln. through
 photosensitized oxidn. in heterogeneous system and applicability of
 sol-gel-technique for immobilization of photosensitizers)
IT Wastewater treatment
 (oxidn., catalytic, photochem.; removal of 2-chlorophenol from aq.
 soln. through photosensitized oxidn. in heterogeneous system and
 applicability of sol-gel-technique for immobilization of
 photosensitizers)
IT Wastewater treatment
 (photocatalytic, solar; removal of 2-chlorophenol from aq. soln.
 through photosensitized oxidn. in heterogeneous system and
 applicability of sol-gel-technique for immobilization of
 photosensitizers)
IT Wastewater treatment
 (photolytic; removal of 2-chlorophenol from aq. soln. through
 photosensitized oxidn. in heterogeneous system and applicability of
 sol-gel-technique for immobilization of photosensitizers)
IT Coating process
 (sol-gel; removal of 2-chlorophenol from aq. soln. through
 photosensitized oxidn. in heterogeneous system and applicability of
 sol-gel-technique for immobilization of photosensitizers)
IT 61-73-4, ***Methylene*** ***blue*** 11121-48-5, Rose Bengal
19660-77-6, Chlorin e6
RL: CAT (Catalyst use); USES (Uses)
 (photosensitizer; removal of 2-chlorophenol from aq. soln. through
 photosensitized oxidn. in heterogeneous system and applicability of

sol-gel-technique for immobilization of photosensitizers)
IT. 95-57-8, 2-Chlorophenol
RL; POL (Pollutant); PRP (Properties); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(removal of 2-chlorophenol from aq. soln. through photosensitized oxidn. in heterogeneous system and applicability of sol-gel-technique for immobilization of photosensitizers)
IT 75-59-2, Tetramethylammonium hydroxide 78-10-4, TEOS 919-30-2, 3-Aminopropyltriethoxysilane 9016-00-6D, Polydimethylsiloxane, hydroxy-terminated 31900-57-9D, Polydimethylsiloxane, hydroxy-terminated
RL: RCT (Reactant); RACT (Reactant or reagent)
(removal of 2-chlorophenol from aq. soln. through photosensitized oxidn. in heterogeneous system and applicability of sol-gel-technique for immobilization of photosensitizers)
IT 7782-44-7, Oxygen, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(removal of 2-chlorophenol from aq. soln. through photosensitized oxidn. in heterogeneous system and applicability of sol-gel-technique for immobilization of photosensitizers and effect of)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L12 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:103485 CAPLUS

DN 141:128581

ED Entered STN: 09 Feb 2004

TI Ethoxysilane-capped PEO-PPO-PEO triblocks: a new family of reverse thermo-responsive polymers

AU Sosnik, Alejandro; Cohn, Daniel

CS The Casali Institute of Applied Chemistry, The Hebrew University of Jerusalem, Jerusalem, 91904, Israel

SO Biomaterials (2004), 25(14), 2851-2858

CODEN: BIMADU; ISSN: 0142-9612

PB Elsevier Science Ltd.

DT Journal

LA English

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 35

AB New reverse thermo-responsive polymers systems combining reverse thermal gelation behavior and a gradual increase in the mech. properties, were created by crosslinking ethoxysilane-capped poly(ethylene oxide)-poly(propylene oxide)-poly(ethylene oxide) triblocks in aq. solns. at physiol. conditions. Pluronic F127 (PEO99-PPO67-PEO99) was

functionalized with (3-isocyanatopropyl) triethoxysilane (IPTS) by reacting its terminal hydroxyl groups with the isocyanate. The ***silane*** -capped PEO-PPO-PEO triblock was characterized by 1H-NMR, GPC, FT-IR and DSC and the rheol. behavior of its aq. solns. were studied. The ***silane*** -contg. triblock retained the reverse thermo-responsive characteristics displayed by the original Pluronic. Over time, the ethoxysilane groups hydrolyzed and created silanol moieties that subsequently condensated, crosslinking the material and generating hydrogels that exhibited gradually increasing mech. properties. It was found that the higher the pH, the faster the process and the higher the viscosity levels attained. Finally, the ability of these gels to perform as matrixes for drug delivery was exemplified by releasing metronidazole and ***methylene*** ***blue***. Findings showed that while a 30% F127 gel at 37.degree.C delivered all the drug within less than 3 days, F127di-IPTS gels completed the process at a much slower rate (up to 15 days).

ST ethoxysilane capped PEO PPO triblock reverse thermoresponsive drug delivery

IT Drug delivery systems
(controlled-release; ethoxysilane-capped PEO-PPO-PEO triblocks as a new family of reverse thermo-responsive polymers)

IT Dissolution
Rheology
(ethoxysilane-capped PEO-PPO-PEO triblocks as a new family of reverse thermo-responsive polymers)

IT Polyoxyalkylenes, biological studies
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ethoxysilane-capped PEO-PPO-PEO triblocks as a new family of reverse thermo-responsive polymers)

IT Gelation
(thermal; ethoxysilane-capped PEO-PPO-PEO triblocks as a new family of reverse thermo-responsive polymers)

IT 691397-13-4DP, Pluronic F127, ethoxysilane-terminated 807333-00-2P
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ethoxysilane-capped PEO-PPO-PEO triblocks as a new family of reverse thermo-responsive polymers)

IT 61-73-4, ***Methylene*** ***blue*** 443-48-1, Metronidazole
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ethoxysilane-capped PEO-PPO-PEO triblocks as a new family of reverse thermo-responsive polymers)

IT 24801-88-5, 3-Isocyanatopropyltriethoxysilane 691397-13-4, Pluronic F127
RL: RCT (Reactant); RACT (Reactant or reagent)
(ethoxysilane-capped PEO-PPO-PEO triblocks as a new family of reverse thermo-responsive polymers)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L12 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:855773 CAPLUS

DN 139:341818

ED Entered STN: 31 Oct 2003

TI Orthodontic adhesives containing polymerizable components and fluoride-releasing materials

IN Brennan, Joan V.; Mitra, Sumitra B.; Schaberg, Mark S.; Kuehn, Robert D.; Oxman, Joel D.; James, Darrell S.; Rozzi, Sharon M.; Cinader, David K.

PA 3M Innovative Properties Company, USA

SO PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K006-00

ICS A61K006-083

CC 63-7 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003088928	A1	20031030	WO 2003-US3774	20030207
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003210921	A1	20031103	AU 2003-210921	20030207
	EP 1501466	A1	20050202	EP 2003-746913	20030207
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2005529637	T2	20051006	JP 2003-585681	20030207
PRAI US	2002-126505	A	20020418		
	WO 2003-US3774	W	20030207		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2003088928	ICM	A61K006-00
		ICS	A61K006-083
		IPCI	A61K0006-00 [ICM,7]; A61K0006-083 [ICS,7]
		IPCR	A61K0006-00 [I,A]; A61K0006-00 [I,C]; A61K0006-02 [I,C]; A61K0006-083 [I,A]
		ECLA	A61K006/00B; A61K006/083B; A61K006/083D
AU 2003210921		IPCI	A61K0006-00 [ICM,7]; A61K0006-083 [ICS,7]
		IPCR	A61K0006-00 [I,A]; A61K0006-00 [I,C]; A61K0006-02 [I,C]; A61K0006-083 [I,A]
EP 1501466		IPCI	A61K0006-00 [ICM,7]; A61K0006-083 [ICS,7]
		IPCR	A61K0006-00 [I,A]; A61K0006-00 [I,C]; A61K0006-02 [I,C]; A61K0006-083 [I,A]
		ECLA	A61K006/00B; A61K006/083B; A61K006/083D
JP 2005529637		IPCI	A61C0007-14 [ICM,7]; A61C0007-28 [ICS,7]; A61K0006-00 [ICS,7]
		IPCR	A61K0006-00 [I,A]; A61K0006-00 [I,C]; A61K0006-02 [I,C]; A61K0006-083 [I,A]

FTERM 4C052/JJ02; 4C052/JJ09; 4C089/AA10; 4C089/BA01;
4C089/BA03; 4C089/BA04; 4C089/BA07; 4C089/BA11;
4C089/BA13; 4C089/BC02; 4C089/BD01; 4C089/BD06;
4C089/BE02; 4C089/BE03; 4C089/BE06; 4C089/CA03

AB Orthodontic adhesives and packaged articles including an orthodontic appliance having a base for bonding the appliance to a tooth are disclosed. In the packaged articles, an adhesive is on the base of the appliance, and a container at least partially surrounds the orthodontic appliance having adhesive on the base thereof. Thus, a compn. contained PEG dimethacrylate and a methacrylic urethane 6.59, PEG dimethacrylate 6.59, bis-GMA 7.31, BHT 0.021, camphorquinone 0.065, diphenyliodonium hexafluorophosphate 0.158, and Et 4-(N,N-dimethylamino)benzoate 0.263%, ***silane*** -treated quartz filler 38.88, ***silane*** -treated fluoroaluminosilicate filler 38.88, and pyrogenic silica 1.25%.

ST orthodontic adhesive polymer fluoride release

IT Dental materials and appliances
(adhesives; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT Dental materials and appliances
(fillings; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT Aluminosilicate glasses
Fluoride glasses
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fluoroaluminosilicate; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT Tooth
(orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT Dental materials and appliances
(orthodontic; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT Dyes
(photobleachable; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT Polysiloxanes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(silica treated with; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT 7631-86-9, Silica, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fumed, silicone-treated; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT 308847-75-8P
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT 1565-94-2, Bis-GMA 25852-47-5, Polyethyleneglycol dimethacrylate 58109-40-3, Diphenyliodonium hexafluorophosphate
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT 61-73-4, ***Methylene*** ***blue*** 548-24-3, Eosin B
2321-07-5, Fluorescein 2516-05-4, Methylene violet 4372-02-5,
4',5'-Dibromofluorescein 6359-05-3, Ethyl Eosin 11121-48-5, Rose Bengal 14808-60-7, Quartz, biological studies 16423-68-0, Erythrosin B 16984-48-8, Fluoride, biological studies 17372-87-1, Eosin Y 18472-87-2, Eosin bluish 37251-80-2, Toluidine blue 51395-88-1, Eosin Yellow
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

IT 9016-00-6, Polydimethyl siloxane 31900-57-9, Polydimethyl siloxane
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(silica treated with; orthodontic adhesives contg. polymerizable components and fluoride-releasing materials)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L12 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:805904 CAPLUS
 DN 139:308991
 ED Entered STN: 15 Oct 2003
 TI Inks for ink jet printers for light- and water-resistant images
 IN Udagawa, Reiko
 PA Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09D011-00
 ICS B41J002-01; B41M005-00
 CC 42-12 (Coatings, Inks, and Related Products)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003292858	A2	20031015	JP 2002-134726	20020401
PRAI JP 2002-134726				20020401

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003292858	ICM	C09D011-00
	ICS	B41J002-01; B41M005-00
	IPCI	C09D0011-00 [ICM,7]; B41J0002-01 [ICS,7]; B41M0005-00 [ICS,7]

AB The inorg. ions of acid dyes and basic dyes are substituted with hydrophilic org. ions to give amphipathic dyes and mixed with aminoalkoxysilanes, butyral resins, water-sol. solvents, and additives to prep. inks. Thus, Auramine O, Rhodamine B, and ***methylene*** ***blue*** were treated with Na p-toluenesulfonate and used in yellow, magenta, and cyan inks, resp.

ST light water resistant jet ink amphipathic dye; aminoalkoxysilane butyral resin amphipathic dye ink

IT Polyvinyl butyrals

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (Slec BL 1; jet printing inks contg. amphipathic dyes for light and water resistance)

IT ***Silanes***

RL: MOA (Modifier or additive use); USES (Uses)
 (alkoxy, amino-; jet printing inks contg. amphipathic dyes for light and water resistance)

IT ***Silanes***

RL: MOA (Modifier or additive use); USES (Uses)
 (amino, alkoxy; jet printing inks contg. amphipathic dyes for light and water resistance)

IT Dyes

(amphipathic; jet printing inks contg. amphipathic dyes for light and water resistance)

IT Antibacterial agents

Electric conductors

Surfactants

UV stabilizers

(jet printing inks contg. amphipathic dyes for light and water resistance)

IT Inks

(jet-printing; jet printing inks contg. amphipathic dyes for light and water resistance)

IT Ions

(org., reaction products with dyes; jet printing inks contg. amphipathic dyes for light and water resistance)

IT Amines, uses

RL: MOA (Modifier or additive use); USES (Uses)

(***silyl*** , alkoxy; jet printing inks contg. amphipathic dyes for light and water resistance)

IT 2465-27-2DP, Auramine O, reaction products with sodium toluenesulfonate
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Auramine O; jet printing inks contg. amphipathic dyes for light and water resistance)

IT 81-88-9DP, Rhodamine B, reaction products with sodium toluenesulfonate
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Rhodamine B; jet printing inks contg. amphipathic dyes for light and water resistance)

IT 3380-34-5, Triclosan
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(jet printing inks contg. amphipathic dyes for light and water resistance)

IT 61-73-4DP, ***Methylene*** ***blue*** , reaction products with sodium toluenesulfonate 657-84-1DP, Sodium p-toluenesulfonate, reaction products with dyes
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(jet printing inks contg. amphipathic dyes for light and water resistance)

IT 87-18-3, p-tert-Butylphenyl salicylate 919-30-2, 3-Aminopropyltriethoxysilane
RL: MOA (Modifier or additive use); USES (Uses)
(jet printing inks contg. amphipathic dyes for light and water resistance)

L12 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:800826 CAPLUS
DN 139:281686
ED Entered STN: 13 Oct 2003
TI Adsorption of ***methylene*** ***blue*** onto silylated silica surfaces, studied using visible attenuated total reflection spectroscopy with a slab optical waveguide
AU Tsunoda, Kin-Ichi; Umemura, Tomonari; Ueno, Hiroko; Okuno, Eriko; Akaiwa, Hideo
CS Department of Chemistry, Gunma University, Kiryu, 376-8515, Japan
SO Applied Spectroscopy (2003), 57(10), 1273-1277
CODEN: APSPA4; ISSN: 0003-7028
PB Society for Applied Spectroscopy
DT Journal
LA English
CC 66-4 (Surface Chemistry and Colloids)
AB The behavior of ***methylene*** ***blue*** (MB) mols. at silica/water and silylated silica/water interfaces was examd. using visible attenuated total reflection spectroscopy with a slab optical waveguide (SOWG). An alkyl ***silane*** coating changed the adsorbed form of MB on the surface from a dimer (.lambda.max = 600 nm, bare SiO₂ surface) to a monomer (.lambda.max = 670 nm), and the C no. of the silylation reagent influenced the amt. of adsorption and the orientation of the mol. Moreover, the addn. of an anionic surfactant, dodecylbenzenesulfonate (DBS), caused the deposition of MB/DBS ion pairs, which gave an identical attenuated total reflection (ATR) spectrum to that of the dimer. Linear dichroism measurements revealed that the ion pairs were adsorbed onto the silylated SiO₂ surface randomly in terms of the orientation angle of MB, while the MB monomer was strongly oriented, i.e., the direction of the transition moment of MB roughly parallels the surface plane. This difference in the orientation angles of the adsorbed species can be utilized for their selective detection using polarization SOWG measurements.
ST ***methylene*** ***blue*** adsorption silylated silica surface
IT Adsorbed substances
Dichroism
Interfacial structure
Molecular orientation
Silylation
(adsorption of ***methylene*** ***blue*** onto silylated SiO₂ surfaces)
IT 75-77-4, Trimethyl chlorosilane, processes 112-04-9,

Octadecyltrichlorosilane 5283-66-9, Octyltrichlorosilane
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (adsorption of ***methylene*** ***blue*** onto silylated SiO₂ surfaces)

IT 61-73-4, ***Methylene*** ***blue***
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
 (adsorption of ***methylene*** ***blue*** onto silylated SiO₂ surfaces)

IT 7631-86-9, Silica, properties
 RL: PRP (Properties)
 (adsorption of ***methylene*** ***blue*** onto silylated SiO₂ surfaces)

IT 25155-30-0, Sodium Dodecylbenzenesulfonate
 RL: NUU (Other use, unclassified); USES (Uses)
 (adsorption of ***methylene*** ***blue*** onto silylated SiO₂ surfaces using)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L12 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:669683 CAPLUS

DN 137:206597

ED Entered STN: 05 Sep 2002

TI Color-changing dental compositions

IN Trom, Matthew C.; Oxman, Joel D.

PA 3M Innovative Properties Company, USA

SO U.S., 11 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C08J003-00

INCL 523118000

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6444725	B1	20020903	US 2000-489612	20000121
PRAI US 2000-489612		20000121		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6444725	ICM	C08J003-00
	INCL	523118000
	IPCI	C08J0003-00 [ICM, 7]
	IPCR	A61K0006-00 [I, A]; A61K0006-00 [I, C]; A61K0006-02 [I, A]; A61K0006-02 [I, C]; A61K0006-083 [I, A]
	NCL	523/118.000; 522/025.000; 522/075.000; 522/908.000
	ECLA	A61K006/00; A61K006/02; A61K006/083B
AB	An aesthetic dental sealant comprising a hardenable resin, a hardener, and a colorant, the compn. has an initial color prior to exposure to actinic radiation and a final color that is different from the initial color subsequent to the compn. being exposed to actinic radiation. A light curable compn. was prep'd. comprising Bis-GMA 41.595, TEGDMA 41.595, camphorquinone 0.15, ethyl-4-dimethylaminobenzoate 0.86, diphenyliodonium hexafluorophosphate 0.51, Tinuvin P (UV stabilizer) 0.86, Aerosil R972 (***silane*** treated fumed silica) 5.13, TiO2 0.74, and tetrabutylammonium tetrafluoroborate 8.56%.	
ST	dental sealant resin hardener colorant actinic radiation	
IT	Electron donors (color-changing dental compns.)	
IT	Coating process Etching (compns.; color-changing dental compns.)	
IT	Onium compounds RL: NUU (Other use, unclassified); USES (Uses) (iodonium; color-changing dental compns.)	
IT	Dyes (photobleachable; color-changing dental compns.)	
IT	Dental materials and appliances (sealants; color-changing dental compns.)	
IT	453556-37-1 453556-38-2 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (color-changing dental compns.)	
IT	61-73-4, ***Methylene*** ***Blue*** 548-24-3, Eosin B 596-03-2, 4',5'-Dibromofluorescein 2321-07-5, Fluorescein 6359-05-3, Ethyl eosin 8004-94-2, Methylene Violet 11121-48-5, Rose Bengal 16423-68-0, Erythrosin B 18472-87-2, Eosin bluish 33239-19-9 37251-80-2, Toluidine Blue 51395-88-1, Eosin Yellow RL: NUU (Other use, unclassified); USES (Uses) (color-changing dental compns.)	
IT	16984-48-8, Fluoride, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (color-changing dental compns.)	
IT	17634-39-8D, Fluorone, derivs. RL: NUU (Other use, unclassified); USES (Uses) (dyes; color-changing dental compns.)	

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- (2) Adair; US 4954414 A 1990 CAPLUS
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 (39) Oxman; US 5596025 A 1997 CAPLUS
 (40) Oxman; US 5998495 A 1999 CAPLUS
 (41) Oxman; US 6187833 B1 2001 CAPLUS
 (42) Palazzotto; US 5545676 A 1996 CAPLUS
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 (45) Randklev; US 5015180 A 1991
 (46) Salz; US 5698020 A 1997 CAPLUS
 (47) Shanklin; US 5055372 A 1991 CAPLUS
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 (61) Yamauchi; US 4259117 A 1981 CAPLUS
 (62) Zador; US 4642126 A 1987

L12 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:595119 CAPLUS
 DN 137:137272
 ED Entered STN: 09 Aug 2002
 TI Designs of labels for detection with a surface-selective nonlinear optical technique
 IN Salafsky, Joshua S.
 PA USA
 SO PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM G01N033-00
 ICS B22F003-26; B22F007-04; B32B005-16; C01G049-08
 CC 9-14 (Biochemical Methods)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002061415	A1	20020808	WO 2001-US22412	20010717
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2439542	AA	20020808	CA 2001-2439542	20010717
	EP 1364204	A1	20031126	EP 2001-952798	20010717
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 US 2004146460 A1 20040729 US 2004-467098 20040317
 PRAI US 2001-265755P P 20010201
 WO 2001-US22412 W 20010717

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002061415	ICM	G01N033-00
	ICS	B22F003-26; B22F007-04; B32B005-16; C01G049-08
	IPCI	G01N0033-00 [ICM,7]; B22F0003-26 [ICS,7]; B22F0007-04 [ICS,7]; B32B0005-16 [ICS,7]; C01G0049-08 [ICS,7]
	IPCR	G01N0027-447 [I,A]; G01N0027-447 [I,C]; G01N0033-543 [I,A]; G01N0033-543 [I,C]; G01N0033-58 [I,A]; G01N0033-58 [I,C]; G02F0001-35 [N,A]; G02F0001-35 [N,C]; G02F0001-37 [N,A]
CA 2439542	ECLA	G01N027/447B3A2; G01N033/543K2; G01N033/58D
EP 1364204	IPCI	G01N0033-00 [ICM,7]; B22F0007-04 [ICS,7]; C01G0049-08 [ICS,7]; B32B0005-16 [ICS,7]; B22F0003-26 [ICS,7]
	IPCR	G01N0033-00 [ICM,7]; B22F0003-26 [ICS,7]; B22F0007-04 [ICS,7]; B32B0005-16 [ICS,7]; C01G0049-08 [ICS,7]
	IPCR	G01N0027-447 [I,A]; G01N0027-447 [I,C]; G01N0033-543 [I,A]; G01N0033-543 [I,C]; G01N0033-58 [I,A]; G01N0033-58 [I,C]; G02F0001-35 [N,A]; G02F0001-35 [N,C]; G02F0001-37 [N,A]
US 2004146460	IPCI	G01N0033-00 [ICM,7]; A61K0049-00 [ICS,7]
	IPCR	G01N0027-447 [I,A]; G01N0027-447 [I,C]; G01N0033-58 [I,A]; G01N0033-58 [I,C]
	NCL	424/009.600
	ECLA	G01N027/447B3A2; G01N033/58

AB The invention concerns second harmonic, sum and difference frequency generation and their use to detect a variety of processes, which are otherwise undetectable, using nonlinear-active labels. The labels must have as high a hyperpolarizability as possible. Several designs for large hyperpolarizability second-harmonic active labels are described herein. These labels can be attached to any target mol. or particle, resulting in more highly nonlinear-optically active targets.

ST label optical technique frequency generation protein genetic engineering colloid

IT Bond

(-CH; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Esters, biological studies

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(Me; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Esters, biological studies

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(NHS; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Dyes

(Styryl-based; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Interface

(air-water; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Spheres

(beads; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Carboxyl group

(carbodiimide-activated; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Interface

(cellular; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Bond

(covalent; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Unsaturated compounds

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(cyanines; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Aggregation

 Azo dyes

 Carboxyl group

 Cell

 Clusters

 Colloids

 Cyanine dyes

 Cyanine dyes

 Drugs

 Electrostatic force

 Functional groups

 Genetic engineering

 Hydroxyl group

 Labels

 Latex

 Linking agents

 Liposomes

 Liquid-liquid interface

 Nanocrystals

 Optical hyperpolarizability

 Self-assembled monolayers

 Semiconductor materials

 Solid-solid interface

 Virus

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Antibodies and Immunoglobulins

 Antigens

 Carbohydrates, analysis

 Enzymes, analysis

 Ligands

 Nucleic acids

 Oligonucleotides

 Peptides, analysis

 Receptors

 RL: ANT (Analyte); ANST (Analytical study)

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Proteins

 RL: ANT (Analyte); ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Oligosaccharides, analysis

 RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study)

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Bacteriorhodopsins

 Fusion proteins (chimeric proteins)

 RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Aldehydes, biological studies

 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Amines, biological studies

 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Gene expression

 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

 (designs of labels for detection with a surface-selective nonlinear optical technique)

IT Ketones, biological studies

IT RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(designs of labels for detection with a surface-selective nonlinear optical technique)

IT Phosphatidylcholines, biological studies
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(designs of labels for detection with a surface-selective nonlinear optical technique)

IT Polyenes
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(designs of labels for detection with a surface-selective nonlinear optical technique)

IT Polyimides, biological studies
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(designs of labels for detection with a surface-selective nonlinear optical technique)

IT Polymers, biological studies
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(designs of labels for detection with a surface-selective nonlinear optical technique)

IT Glass, properties
Salts, properties
Silanes
RL: PRP (Properties)
(designs of labels for detection with a surface-selective nonlinear optical technique)

IT Frequency
(difference; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Thiols, properties
RL: PRP (Properties)
(functionalized; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Proteins
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(green fluorescent; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Cyanine dyes
(hemicyanine; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Cyanine dyes
(indodicarbo-; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Acetyl group
(iodo-; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Surface
(liq.-vapor; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Interface
(membrane; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Symmetry
(non-centro; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Particles
(non-centrosym. metallic; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Bond
(non-covalent; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Chemisorption
(physio-; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Molecules
(small; designs of labels for detection with a surface-selective nonlinear optical technique)

IT Esters, biological studies
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)
(sulfo-NHS; designs of labels for detection with a surface-selective
nonlinear optical technique)

IT Frequency
(sum; designs of labels for detection with a surface-selective
nonlinear optical technique)

IT Glycols, biological studies
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)
(vicinal; designs of labels for detection with a surface-selective
nonlinear optical technique)

IT 155862-95-6 155863-00-6
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical
study); USES (Uses)
(designs of labels for detection with a surface-selective nonlinear
optical technique)

IT 56-85-9, Glutamine, biological studies 58-85-5, Biotin 61-73-4,
Methylene ***blue*** 62-53-3D, Aniline, tricyanovinyl
derivs. 77-77-0, Vinyl sulfone 92-84-2, Phenothiazine 103-33-3D,
Azobenzene, sulfonyl-substituted 108-78-1, Melamine, biological studies
110-02-1, Thiophene 198-55-0, Perylene 273-53-0, Benzoxazole
288-42-6D, Oxazole, derivs. 541-59-3, Maleimide 588-59-0, Stilbene
588-59-0D, Stilbene, diazo- derivs. 1283-93-8 1333-47-7D,
Methylcoumarin, azido- 2321-07-5, Fluorescein 3784-99-4D, Stilbazium,
derivs. 5998-92-5D, 5-aryl derivs. 9003-21-8, Polymethylacrylate
9013-20-1, Streptavidin 13940-21-1, Sulphydryl 25215-10-5, Guanidinium
25265-76-3, Diaminobenzene 38620-93-8, Stilbazole 56902-08-0,
Bithiophene
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)
(designs of labels for detection with a surface-selective nonlinear
optical technique)

IT 288-42-6, 1,3-Oxazole 288-42-6D, 1,3-Oxazole, 2,5-diaryl derivs.
1303-00-0, Gallium arsenide (GaAs), properties 1306-23-6, Cadmium
sulfide (CdS), properties 1306-24-7, Cadmium selenide (CdSe), properties
1332-29-2, Tin oxide 7440-06-4, Platinum, properties 7440-21-3,
Silicon, properties 7440-22-4, Silver, properties 7440-57-5, Gold,
properties 7631-86-9, Silica, properties 9003-53-6, Polystyrene
12063-98-8, Gallium phosphide (GaP), properties 22398-80-7, Indium
phosphide (InP), properties 70380-75-5D, 2-aryl derivs. 110360-50-4
439858-43-2
RL: PRP (Properties)
(designs of labels for detection with a surface-selective nonlinear
optical technique)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Aoki; US 5599627 A 1997
- (2) Hansen; US 3253065 A 1966
- (3) Hubbard; Applied Physics Letters 1994, V65(3), P265 CAPLUS
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- (6) Schickfluss; US 3847909 A 1974 CAPLUS
- (7) Tang; WO 9851435 A1 1998 CAPLUS
- (8) Uchida; US 5652060 A 1997 CAPLUS

L12 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:522159 CAPLUS

DN 137:59858

ED Entered STN: 12 Jul 2002

TI Method and apparatus using a surface-selective nonlinear optical technique
IN Salafsky, Joshua S.

PA USA

SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-543

CC 9-1 (Biochemical Methods)
Section cross-reference(s): 1

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002054071	A1	20020711	WO 2001-US22441	20010717
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2434076	AA	20020711	CA 2001-2434076	20010717
	EP 1358482	A1	20031105	EP 2001-954721	20010717
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004530105	T2	20040930	JP 2002-554718	20010717
PRAI	US 2001-260261P	P	20010108		
	US 2001-260300P	P	20010108		
	US 2001-262214P	P	20010117		
	WO 2001-US22441	W	20010717		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
	WO 2002054071	ICM	G01N033-543		
		IPCI	G01N0033-543 [ICM, 7]		
		IPCR	G01N0033-543 [I, A]; G01N0033-543 [I, C]; H04L0029-08 [N, A]; H04L0029-08 [N, C]		
		ECLA	G01N033/543K2		
	CA 2434076	IPCI	G01N0033-543 [ICM, 7]; G06F0017-00 [ICS, 7]; G06F0019-00 [ICS, 7]; C12Q0001-02 [ICS, 7]; C12Q0001-68 [ICS, 7]; G01N0021-84 [ICS, 7]		
	EP 1358482	IPCI	G01N0033-543 [ICM, 7]		
		IPCR	G01N0033-543 [I, A]; G01N0033-543 [I, C]; H04L0029-08 [N, A]; H04L0029-08 [N, C]		
	JP 2004530105	IPCI	G01N0021-63 [ICM, 7]; G01N0021-27 [ICS, 7]; G01N0033-53 [ICS, 7]; G01N0033-543 [ICS, 7]; G01N0033-545 [ICS, 7]; G01N0033-552 [ICS, 7]; G01N0033-553 [ICS, 7]; G01N0033-566 [ICS, 7]; G01N0021-05 [ICS, 7]		
		IPCR	G01N0033-543 [I, A]; G01N0033-543 [I, C]; H04L0029-08 [N, A]; H04L0029-08 [N, C]		
		FTERM	2G043/AA03; 2G043/BA16; 2G043/CA03; 2G043/DA02; 2G043/DA05; 2G043/EA10; 2G043/EA13; 2G043/EA14; 2G043/FA01; 2G043/FA02; 2G043/HA01; 2G043/HA05; 2G043/HA06; 2G043/HA07; 2G043/HA15; 2G043/JA02; 2G043/JA03; 2G043/JA04; 2G043/KA01; 2G043/KA05; 2G043/KA08; 2G043/KA09; 2G043/LA02; 2G043/LA03; 2G043/MA01; 2G043/NA01; 2G057/AA02; 2G057/AA04; 2G057/AB07; 2G057/AC01; 2G057/BA05; 2G059/AA05; 2G059/BB12; 2G059/CC16; 2G059/DD05; 2G059/EE02; 2G059/EE05; 2G059/EE12; 2G059/GG01; 2G059/GG04; 2G059/GG08; 2G059/HH01; 2G059/HH02; 2G059/HH06; 2G059/JJ02; 2G059/JJ05; 2G059/JJ12; 2G059/JJ13; 2G059/JJ15; 2G059/JJ18; 2G059/JJ19; 2G059/JJ20; 2G059/KK04; 2G059/LL04; 2G059/MM01; 2G059/MM03		
AB	A surface-selective nonlinear optical technique, such as second harmonic or sum frequency generation, is used to detect target-probe binding reactions or their effects, at an interface, without the use of labels. In addn., the direction of the nonlinear light is scattered from the interface in a well-defined direction and therefore its incidence at a detector some distance from the interface may be easily mapped to a specific and known location at the interface.				
ST	app surface selective nonlinear optical technique; biochip optical imaging hybridization drug screening protein DNA RNA				
IT	Cooperative phenomena (antagonism; method and app. using a surface-selective nonlinear optical technique)				
IT	Apparatus (array; method and app. using a surface-selective nonlinear optical technique)				
IT	Surface electric charge (biol.; method and app. using a surface-selective nonlinear optical				

technique)

IT . Unsaturated compounds
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(cyanines; method and app. using a surface-selective nonlinear optical technique)

IT Second-harmonic generation
(electrooptical; method and app. using a surface-selective nonlinear optical technique)

IT Imaging
(endoscopy; method and app. using a surface-selective nonlinear optical technique)

IT Wave
(evanescent, reflection; method and app. using a surface-selective nonlinear optical technique)

IT Cyanine dyes
(hemicyanine; method and app. using a surface-selective nonlinear optical technique)

IT Cyanine dyes
(indodicarbo-; method and app. using a surface-selective nonlinear optical technique)

IT Ion channel
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(ligand-gated; method and app. using a surface-selective nonlinear optical technique)

IT Proteins
RL: PRP (Properties)
(membrane; method and app. using a surface-selective nonlinear optical technique)

IT Affinity
Animal cell
Animal tissue
Azo dyes
Cyanine dyes
Electrostatic force
Fiber optics
Interface
Labels
Latex
Mathematical methods
Microarray technology
Molecular recognition
Nanoparticles
Optical detectors
Optical sensors
Planar waveguides (optical)
Protein sequences
Semiconductor materials
Simulation and Modeling
Sum-frequency generation
UV radiation
Virus
(method and app. using a surface-selective nonlinear optical technique)

IT Neuropeptides
RL: ANT (Analyte); ANST (Analytical study)
(method and app. using a surface-selective nonlinear optical technique)

IT Antibodies and Immunoglobulins
Antigens
Carbohydrates, analysis
Enzymes, analysis
Haptens
Hormones, animal, analysis
Ligands
Nucleic acids
Nucleosides, analysis
Oligonucleotides
Oligosaccharides, analysis
Peptide nucleic acids
Peptides, analysis
Polynucleotides
Receptors
Toxins

CDNA
IT RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
Proteins
IT RL: ANT (Analyte); ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
DNA
IT RNA
IT RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
Polyenes
IT RL: ARU (Analytical role, unclassified); ANST (Analytical study)
Polyimides, analysis
IT RL: ARU (Analytical role, unclassified); ANST (Analytical study)
Glass, uses
IT RL: DEV (Device component use); USES (Uses)
Metals, uses
IT RL: DEV (Device component use); USES (Uses)
Polyamide fibers, uses
IT RL: DEV (Device component use); USES (Uses)
Phospholipids, properties
IT RL: PRP (Properties)
Fluids
IT RL: DEV (Device component use); USES (Uses)
Egg
IT Biosensors
IT ***Silanes***
IT RL: DEV (Device component use); USES (Uses)
Nucleic acid bases
IT RL: BSU (Biological study, unclassified); BIOL (Biological study)
Phosphates, analysis
IT RL: ARU (Analytical role, unclassified); ANST (Analytical study)
Electrooptical effect
IT RL: ARU (Analytical role, unclassified); ANST (Analytical study)
IT 61-73-4, ***Methylene*** ***blue*** 92-84-2, Phenothiazine
103-33-3D, derivs. 103-33-3D, Azobenzene, sulfonyl derivs. 108-78-1D,
Melamine, derivs. 198-55-0D, Perylene, derivs. 273-53-0D, Benzoxazole,
derivs. 288-42-6D, Oxazole, cycloalkano and diaryl derivs. 1283-93-8
2321-07-5D, Fluorescein, derivs. 3784-99-4D, Stilbazium, derivs.
5998-92-5D, aryl derivs. 17082-33-6D, derivs. 25087-26-7D,
Polymethacrylic acid, derivs. 25265-76-3D, Diaminobenzene, derivs.
38620-93-8, Stilbazole 70380-75-5D, aryl derivs. 110360-50-4
155862-95-6 155863-00-6 439858-43-2 439858-44-3D, derivs.
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
1303-00-0, Gallium arsenide, uses 1306-23-6, Cadmium sulfide, uses
1306-24-7, Cadmium selenide, uses 7440-06-4, Platinum, uses 7440-22-4,
Silver, uses 7440-57-5, Gold, uses 13463-67-7, Titanium oxide, uses
14014-97-2, Gallium phosphate 14693-82-4, Indium phosphate
IT RL: DEV (Device component use); USES (Uses)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Batchelder; US 4844613 A 1989 CAPLUS
- (2) Shanks; US 4978503 A 1990 CAPLUS
- (3) Sutherland; US 4775637 A 1988
- (4) Sutherland; US 4818710 A 1989

L12 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:446178 CAPLUS

DN 137:14966

ED Entered STN: 13 Jun 2002

TI General method for the covalent immobilisation of indicators in, or onto a support useful for the fabrication of optical sensors

IN Caputo, Giuseppe; Della, Ciana Leopoldo

PA Innosense S.R.L., Italy

SO Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G01N031-22

CC 79-2 (Inorganic Analytical Chemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1213583	A1	20020612	EP 2000-126778	20001206
		R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR		
	PRAI EP 2000-126778			20001206	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

EP 1213583	ICM	G01N031-22
	IPCI	G01N0031-22 [ICM,6]
	IPCR	G01N0021-77 [I,A]; G01N0021-77 [I,C]; G01N0031-22 [I,A]; G01N0031-22 [I,C]
	ECLA	G01N021/77B; G01N031/22

AB The invention discloses a method for the covalent immobilization of indicator dyes in, or onto a support. The dyes can work in absorbance, reflectance or fluorescence mode. The dyed support is useful as the transducer element in an optical sensor. According to the invention, the indicator dye is dissolved or suspended in a solvent medium, optionally contg. electrolytes to control ionic strength and pH. Aq. formaldehyde is then added to the mixt. A support to be used as the sensing element in an optical sensor is added to the mixt. and stirred or shaken for a period of time at a temp. comprised between room temp. and 100.degree.. Suitable supports include inorg. and org. polymers with primary and/or secondary amino groups.

ST covalent immobilization indicator fabrication optical sensor

IT Metal alkoxides

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(alkali metal; general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)

IT Alkali metal compounds

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(alkoxides; general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)

IT ***Silanes***

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(amino; general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)

IT Glass substrates

Indicators

Mannich reaction

Optical sensors

Polymer-supported reagents

Reflection spectra

(general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)

IT Alkali metal hydroxides

Polysiloxanes, processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
. (general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)

IT Amines, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(***silyl*** ; general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)

IT Ceramics
(substrates; general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)
IT 61-73-4, ***Methylene*** ***blue*** 72-48-0, Alizarin 76-60-8, Bromocresol green 77-09-8, Phenolphthalein 81-88-9, Rhodamine B 115-39-9, Bromophenol blue 115-40-2, Bromocresol purple 493-52-7, Methyl red 531-53-3, Azure A 547-58-0, Methyl orange 548-62-9, Crystal violet 553-24-2, Neutral red 569-64-2, Malachite green 573-58-0, Congo red 587-98-4, Metanil yellow 632-99-5, Basic fuchsin 1733-12-6, Cresol red 2321-07-5, Fluorescein 2381-85-3, Nile blue 2538-85-4, Eriochrome blue black R 4430-20-0, Chlorophenol red 5423-07-4, Nitrazine yellow 6441-64-1, Brilliant yellow 34487-61-1, Phenol red sodium salt
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)

IT (general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)
IT 60676-86-0, Vitreous silica 89800-07-7, Biodyne A 93356-75-3, Eupergit C 123263-21-8, LoProdyne 128808-29-7, Biodyne B
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

IT (general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)
IT 50-00-0, Formaldehyde, processes 124-09-4, 1,6-Diaminohexane, processes 13598-78-2D, Aminosilane, derivs. 58086-67-2 432544-96-2
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(general method for covalent immobilization of indicators in, or onto support useful for fabrication of optical sensors)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L12 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:150456 CAPLUS

DN 136:359326

ED Entered STN: 27 Feb 2002

TI Sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a trimethylsilane-modified glass slab optical waveguide

AU Umemura, Tomonari; Kasuya, Yuichi; Odake, Tamao; Tsunoda, Kin-Ichi

CS Department of Chemistry, Faculty of Engineering, Gunma University, Gunma, 376-8515, Japan

SO Analyst (Cambridge, United Kingdom) (2002), 127(1), 149-152
CODEN: ANALAO; ISSN: 0003-2654

PB Royal Society of Chemistry

DT Journal

LA English

CC 61-3 (Water)

Section cross-reference(s): 80

AB Attenuated total reflection spectrometry with a slab optical waveguide (SOWG) was developed as a rapid and sensitive measurement of total anionic surfactants by the ***methylene*** ***blue*** active substance (MBAS) method. A fused-SiO₂ sheet, used as a guiding layer, was modified with tri-Me ***silane*** (TMS) to ext. and conc. the MBASs on the SOWG surface. Based on preliminary studies of the adsorption behavior and visible ATR spectrum of MB on the modified SiO₂ surface, a detection wavelength of 600 nm was chosen for the sensitive measurement of anionic surfactants. With a MB concn. of 10 .μ.M in the measurement soln., the calibration curve for a typical anionic surfactant, Na

dodecylbenzenesulfonate, was linear up to 0.6 .mu.M and the detection limit was 0.07 .mu.M. The proposed method was applied to the detn. of total anionic surfactants in river water.

ST water analysis anionic surfactant ***methylene*** ***blue*** ; attenuated reflection spectrometry trimethylsilane glass optical waveguide

IT Surfactants (anionic; sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a methylsilane-modified glass slab optical waveguide)

IT pH (effect of pH on the measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry)

IT Optical waveguides
Reflection spectra
Reflection spectroscopy
River water pollution (sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a methylsilane-modified glass slab optical waveguide)

IT 7732-18-5, Water, analysis
RL: AMX (Analytical matrix); ANST (Analytical study) (sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a methylsilane-modified glass slab optical waveguide)

IT 151-21-3, Sodium dodecyl sulfate, analysis 25155-30-0, Sodium dodecylbenzenesulfonate
RL: ANT (Analyte); ANST (Analytical study) (sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a methylsilane-modified glass slab optical waveguide)

IT 61-73-4
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a methylsilane-modified glass slab optical waveguide)

IT 7487-88-9, Magnesium sulfate, analysis 7647-14-5, Sodium chloride, analysis 10043-52-4, Calcium chloride, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study) (sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a methylsilane-modified glass slab optical waveguide)

IT 75-77-4, Trimethyl chlorosilane, processes 871-92-1, Octyl ***silane*** 18623-11-5, Octadecyl ***silane***
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process) (sensitive measurement of ***methylene*** ***blue*** active substances by attenuated total reflection spectrometry with a methylsilane-modified glass slab optical waveguide)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L12 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:138455 CAPLUS
 DN 137:333596
 ED Entered STN: 22 Feb 2002
 TI Label-free DNA hybridization detection with molecular beacon immobilized in photopolymerized acrylamide gel microarray
 AU Wang, Hong; Li, Jiong; Liu, Quanjun; Liu, Heping; Lu, Zuhong
 CS National Laboratory of Molecular and Biomolecular Electronics, Southeast University, Nanjing, 210096, Peop. Rep. China
 SO Proceedings of SPIE-The International Society for Optical Engineering (2001), 4601(Micromachining and Microfabrication Process Technology and Devices), 256-259
 CODEN: PSISDG; ISSN: 0277-786X
 PB SPIE-The International Society for Optical Engineering
 DT Journal
 LA English
 CC 3-1 (Biochemical Genetics)
 Section cross-reference(s): 9
 AB Photopolymerd. acrylamide gel microarray used to immobilize the mol. beacon for label free DNA hybridization detection is described in this paper. Polyacrylamide gel microarray was prep'd. by UV photopolymer. of 4% acrylamide in 40% glycerol, 0.002% ***methylene*** ***blue***, 0.012% TEMED and 0.1M phosphate buffer (PH=7) with a Relpel- ***silane*** pretreated quartz mask. This kind of three-dimensional gel microarray provides more than 100 times great immobilization capacity. The hybridization and other processes with it resemble a homogeneous liq. phase reaction rather than a heterogeneous liq.-solid interface reaction. The specially designed mol. beacons contain a 15 base loop sequence with 5 base pair stem, a 20 base thymine as spacer, a 5'-end amino group for immobilization, a fluorescein in the middle of the sequence as the fluorophore and a 3'-end DABCYL as the quencher. Between the 5'-end amino group and the stem, the 20 base thymine is used to minimize de-stability caused by 5'-end immobilization. Confocal microscope was used to investigate the fluorescence intensity of gel immobilized mol. beacon probes. After hybridization we can easily distinguish complementary and noncomplementay targets with gel-immobilized mol. beacon probes. Image anal. showed that the fluorescence intensity ratio of complementary to noncomplementay probes is great than 5. The potential applications of gel-immobilized mol. beacon microarray are mutation detection, pathogenic detection, etc. In a parallel, cost saving and label-free detection way.
 ST DNA hybridization mol beacon immobilized acrylamide gel microarray
 IT Nucleic acid hybridization
 (DNA-DNA; label-free DNA hybridization detection with mol. beacon immobilized in photopolymerd. acrylamide gel microarray)
 IT DNA microarray technology
 Immobilization, molecular or cellular
 (label-free DNA hybridization detection with mol. beacon immobilized in photopolymerd. acrylamide gel microarray)
 IT DNA
 RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (label-free DNA hybridization detection with mol. beacon immobilized in photopolymerd. acrylamide gel microarray)
 IT 9003-05-8
 RL: DEV (Device component use); USES (Uses)
 (label-free DNA hybridization detection with mol. beacon immobilized in photopolymerd. acrylamide gel microarray)
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

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- (2) Edward, N; Nucleic Acid Res 1996, V24, P3142
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- (7) Sokol, D; Proc Natl Acad Sci USA 1998, V95, P11538 CAPLUS
- (8) Steemers, F; Nat Biotech 2000, V18, P91 CAPLUS
- (9) Tyagi, S; Nat Biotech 1996, V14, P303 CAPLUS

L12 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:756418 CAPLUS
 DN 136:280812
 ED Entered STN: 17 Oct 2001
 TI Additive for yellowing reduction of white alkyd paints
 AU Li, Dan; You, Bo; Wu, Limin
 CS Fudan University, Shanghai, 200433, Peop. Rep. China
 SO Tuliao Gongye (2001), 31(8), 1-3
 CODEN: TLKYD5; ISSN: 0253-4312
 PB Huagongbu Tuliao Gongye Yanjiuso
 DT Journal
 LA Chinese
 CC 42-5 (Coatings, Inks, and Related Products)
 AB The causes leading to alkyd paint films yellowing were studied and the results showed that the presence of oxidn.-redn. initiator, pigment, ***silane*** coupling agent, photosensitizer, fluorescent brightening agent and antioxidant all affected the yellowing index of the films, and an optimum additive compn. to reduce yellowing contains: Silquest A-174 2-2.5%, ***methylene*** ***blue*** 10 ppm, fluorescent brightening agent 0.5%, Irganox 1010 or Irganox 1076 0.5%.
 ST alkyd coating film additive yellowing reducing
 IT Yellowing prevention
 (agents; additive for yellowing redn. of white alkyd coatings)
 IT Alkyd resins
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (fatty acid-based; additive for yellowing redn. of white alkyd coatings)
 IT Paints
 (solvent-based; additive for yellowing redn. of white alkyd coatings)
 IT Discoloration prevention agents
 (yellowing; additive for yellowing redn. of white alkyd coatings)
 IT 2082-79-3, Irganox 1076 6683-19-8, Irganox 1010
 RL: MOA (Modifier or additive use); USES (Uses)
 (antioxidant; additive for yellowing redn. of white alkyd coatings)
 IT 2530-85-0, Silquest A-174
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; additive for yellowing redn. of white alkyd coatings)
 IT 13463-67-7, Titanium dioxide, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (pigment/filler; additive for yellowing redn. of white alkyd coatings)
 IT 61-73-4, ***Methylene*** ***blue***
 RL: MOA (Modifier or additive use); USES (Uses)
 (pigment; additive for yellowing redn. of white alkyd coatings)

L12 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:45948 CAPLUS
 DN 134:104688
 ED Entered STN: 19 Jan 2001
 TI Silicate-based material suitable for holographic medium and optical articles and its manufacture
 IN Katz, Howard Edan
 PA Lucent Technologies Inc., USA
 SO Eur. Pat. Appl., 10 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C03B008-02
 ICS C03C014-00; C01B037-00
 CC 57-1 (Ceramics)
 Section cross-reference(s): 38, 73
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1069081	A2	20010117	EP 2000-305568	20000703
	EP 1069081	A3	20020109	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO	
	US 6423770	B1	20020723	US 1999-353898	19990715
	AU 2000071332	A5	20010130	AU 2000-71332	20000703
	JP 2001055508	A2	20010227	JP 2000-214299	20000714
PRAI	US 1999-353898	A	19990715		
	WO 2000-US40297	W	20000703		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1069081	ICM	C03B008-02	
	ICS	C03C014-00; C01B037-00	
	IPCI	C03B0008-02 [ICM,6]; C03C0014-00 [ICS,6]; C01B0037-00 [ICS,6]	
	IPCR	C01B0037-00 [I,A]; C01B0037-00 [I,C]; C03B0019-12 [I,A]; C03B0019-12 [I,C]; C03C0014-00 [I,A]; C03C0014-00 [I,C]	
US 6423770	ECLA	C01B037/00; C03B019/12; C03C014/00	
	IPCI	C08K0003-00 [ICM,7]	
	IPCR	C01B0037-00 [I,A]; C01B0037-00 [I,C]; C03B0019-12 [I,A]; C03B0019-12 [I,C]; C03C0014-00 [I,A]; C03C0014-00 [I,C]	
	NCL	524/492.000; 524/493.000	
	ECLA	C01B037/00; C03B019/12; C03C014/00	
AU 2000071332	IPCR	A61F0009-02 [I,A]; A61F0009-02 [I,C]; G02C0011-00 [I,A]; G02C0011-00 [I,C]	
JP 2001055508	IPCI	C08L0083-02 [ICM,7]; C08J0003-24 [ICS,7]; C08J0003-28 [ICS,7]; C08J0005-00 [ICS,7]; C08K0003-34 [ICS,7]; C08K0005-00 [ICS,7]	
	IPCR	C01B0037-00 [I,A]; C01B0037-00 [I,C]; C03B0019-12 [I,A]; C03B0019-12 [I,C]; C03C0014-00 [I,A]; C03C0014-00 [I,C]	

AB A silicate material, comprising a silicate domain and .gtoreq.1 substantially nonsilicate domains is described. The material is produced by mixing a templating mixt. with a pre-cured resin and .gtoreq.1 resin precursors. The templating mixt. comprises .gtoreq.1 surfactants, .gtoreq.1 alcs. and water. A pre-cured resin is formed by reacting .gtoreq.1 silicate resin precursors with water, and preferably in the presence of a co-solvent and a catalyst. The invention also includes a method for fabricating the silicate material, a holog. medium, an optical article, and a method for fabricating an optical article.

ST silicate material manuf template mixt resin holog; optical filter silicate material manuf template mixt resin; waveguide optical silicate material manuf template mixt resin

IT Heat treatment
(120-130.degree.; manuf. of silicate-based material for holog. medium and optical articles)

IT Hydrocarbons, uses
RL: NUU (Other use, unclassified); USES (Uses)
(alicyclic, fluid exchange with; manuf. of silicate-based material for holog. medium and optical articles)

IT ***Silanes***
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(alkoxy, silicate precursor; manuf. of silicate-based material for holog. medium and optical articles)

IT ***Silanes***
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(alkylalkoxy, silicate precursor; manuf. of silicate-based material for holog. medium and optical articles)

IT Gases
(controlled atm.; manuf. of silicate-based material for holog. medium and optical articles)

IT Solvents
(cosolvents; manuf. of silicate-based material for holog. medium and optical articles)

IT Aromatic hydrocarbons, uses

Esters, uses

Ethers, uses

IT RL: NUU (Other use, unclassified); USES (Uses)
IT (fluid exchange with; manuf. of silicate-based material for holog.
medium and optical articles)

IT Hydrocarbons, uses
IT RL: NUU (Other use, unclassified); USES (Uses)
IT (halo; manuf. of silicate-based material for holog. medium and optical
articles)

IT Molding
IT (injection; manuf. of silicate-based material for holog. medium and
optical articles)

IT Pore
IT (interconnected; manuf. of silicate-based material for holog. medium
and optical articles)

IT Annealing
Catalysts
Coating process
Dielectric constant
Electric conductors
Electric insulators
Extrusion, nonbiological
Holography
Light scattering
Molding
Molds (forms)
Optical filters
Optical waveguides
Printing (impact)
Refractive index
Semiconductor materials
Surfactants
IT (manuf. of silicate-based material for holog. medium and optical
articles)

IT Silicates, preparation
IT RL: IMF (Industrial manufacture); PREP (Preparation)
IT (manuf. of silicate-based material for holog. medium and optical
articles)

IT Alcohols, processes
IT RL: PEP (Physical, engineering or chemical process); PROC (Process)
IT (manuf. of silicate-based material for holog. medium and optical
articles)

IT Glass, processes
IT RL: PEP (Physical, engineering or chemical process); TEM (Technical or
engineered material use); PROC (Process); USES (Uses)
IT (manuf. of silicate-based material for holog. medium and optical
articles)

IT Crosslinking
IT (photochem.; manuf. of silicate-based material for holog. medium and
optical articles)

IT Photoimaging materials
IT (photopolymerizable; manuf. of silicate-based material for holog.
medium and optical articles)

IT Resins
IT RL: PEP (Physical, engineering or chemical process); PROC (Process)
IT (pre-cured and precursors; manuf. of silicate-based material for holog.
medium and optical articles)

IT Porous materials
IT (silicate-based material; manuf. of silicate-based material for holog.
medium and optical articles)

IT Materials processing
IT (templates, mixt.; manuf. of silicate-based material for holog. medium
and optical articles)

IT 67-63-0, Isopropanol, uses 75-05-8, Acetonitrile, uses
IT RL: NUU (Other use, unclassified); USES (Uses)
IT (curing with; manuf. of silicate-based material for holog. medium and
optical articles)

IT 76-05-1, uses 7647-01-0, Hydrochloric acid, uses 7697-37-2, Nitric
acid, uses 10026-04-7, Silicon chloride (SiCl4) 10035-10-6, Hydrogen
bromide, uses 10294-34-5, Boron chloride (BCl3)
IT RL: CAT (Catalyst use); USES (Uses)
IT (manuf. of silicate-based material for holog. medium and optical
articles)

IT 67-56-1, Methanol, uses 125051-32-3, CGI-784

RL: MOA (Modifier or additive use); USES (Uses)
 (manuf. of silicate-based material for holog. medium and optical articles)
 IT 25917-35-5, Hexanol
 RL: NUU (Other use, unclassified); USES (Uses)
 (manuf. of silicate-based material for holog. medium and optical articles)
 IT 57-09-0, Cetyltrimethylammonium bromide 681-84-5, Tetramethoxy
 silane 7732-18-5, Water, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (manuf. of silicate-based material for holog. medium and optical articles)
 IT 108-88-3, Toluene, uses 48145-04-6, Phenoxy ethyl acrylate
 RL: NUU (Other use, unclassified); USES (Uses)
 (nonpolar solvent; manuf. of silicate-based material for holog. medium and optical articles)
 IT 61-73-4, ***Methylene*** ***blue*** 105-59-9, n-Methyl diethanol
 amine 11121-48-5, Rose bengal 16423-68-0, Erythrosine 17372-87-1,
 Eosin
 RL: MOA (Modifier or additive use); USES (Uses)
 (photoinitiator; manuf. of silicate-based material for holog. medium and optical articles)
 IT 78-10-4, Tetraethoxysilane 998-30-1, Triethoxysilane 1185-55-3,
 Methyltrimethoxysilane
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (silicate precursor; manuf. of silicate-based material for holog. medium and optical articles)
 IT 60354-74-7P
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)
 (silicate precursor; manuf. of silicate-based material for holog. medium and optical articles)
 IT 108-93-0, Cyclohexanol, uses 818-61-1
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent exchange with; manuf. of silicate-based material for holog. medium and optical articles)
 IT 111-87-5, Octanol, uses 9002-92-0, Brij30
 RL: MOA (Modifier or additive use); USES (Uses)
 (surfactant mixt.; manuf. of silicate-based material for holog. medium and optical articles)
 IT 112-60-7D, Tetra ethylene glycol, Mono dodecyl ether 123-03-5,
 Cetylpyridinium chloride
 RL: MOA (Modifier or additive use); USES (Uses)
 (surfactant; manuf. of silicate-based material for holog. medium and optical articles)

L12 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:457933 CAPLUS
 DN 131:88661
 ED Entered STN: 27 Jul 1999

TI Dendrimer-based nanoscopic sponges and metal composites
 IN Balogh, Lajos; Deleuze-Jallouli, Agrnes M.; Dvornic, Petar R.; Owen, Michael J.; Perz, Susan Victoria; Spindler, Ralph

PA Dow Corning Corporation, USA

SO Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08L101-02

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 928813	A1	19990714	EP 1999-100318	19990112
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 5938934	A	19990817	US 1998-6573	19980113
	JP 11263837	A2	19990928	JP 1999-6781	19990113
PRAI	US 1998-6573	A	19980113		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

EP 928813	ICM	C08L101-02
	IPCI	C08L0101-02 [ICM,6]
	IPCR	C08G0083-00 [I,A]; C08G0083-00 [I,C]; C08L0101-00 [I,A]; C08L0101-00 [I,C]
	ECLA	C08G083/00D; C08L101/00B
US 5938934	IPCI	C02F0001-42 [ICM,6]
	IPCR	C08G0083-00 [I,A]; C08G0083-00 [I,C]; C08L0101-00 [I,A]; C08L0101-00 [I,C]
	NCL	210/688.000; 210/681.000; 210/692.000; 210/912.000; 424/DIG.016; 524/083.000; 524/190.000; 524/413.000; 524/430.000; 524/440.000; 525/420.000; 525/431.000; 525/477.000; 525/540.000; 977/788.000
	ECLA	C08G083/00D; C08L101/00B
JP 11263837	IPCI	C08G0069-48 [ICM,6]; C08G0077-455 [ICS,6]
AB	The title compns. comprise (i) a metal cation, (ii) a metal salt, (iii) a metal oxide, (iv) an elemental metal, (v) a water-sol. org. mol., or (vi) a water sol. organometallic mol., adsorbed, absorbed or encapsulated in a dendrimer-based network having hydrophilic and hydrophobic nanoscopic domains, the dendrimer-based network comprising a crosslinked product of a radially layered copolydendrimer (e.g., PANAM) having a hydrophilic interior and a hydrophobic organosilicon exterior terminated with reactive end groups, the copolydendrimer being prep'd. by reacting a hydrophilic dendrimer having -NH ₂ surface groups, with an organosilicon compd., in the presence of a solvent. The dendritic polymer based networks are capable of performing as nanoscopic sponges for electrophilic guest moieties. As a result, these networks yield nanoscopic organo-inorg. composites which contain organosilicon units as an integral part of their covalently bonded matrix.	
ST	PANAM dendrimer silicone modified network nanoscopic sponge	
IT	Antibacterial agents	
	Catalysts	
	Drugs	
	Dyes	
	Electric conductors	
	Encapsulation	
	Fluorescent substances	
	Liquid crystals	
	Nonlinear optical materials	
	Phosphorescent substances	
	Photosensitizers (pharmaceutical)	
	Pigments, nonbiological	
	Surfactants	
	(dendrimer-based nanoscopic sponges and metal composites)	
IT	Dendritic polymers	
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)	
	(dendrimer-based nanoscopic sponges and metal composites)	
IT	Polyamines	
	Polyamines	
	Polyamines	
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)	
	(polyamide-, dendrimers, reaction products with acrylic ***silanes*** ; dendrimer-based nanoscopic sponges and metal composites)	
IT	Dendritic polymers	
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)	
	(polyamide-polyamines, reaction products with acrylic ***silanes*** ; dendrimer-based nanoscopic sponges and metal composites)	
IT	Polyamides, preparation	
	Polyamides, preparation	
	Polyamides, preparation	
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)	
	(polyamine-, dendrimers, reaction products with acrylic ***silanes*** ; dendrimer-based nanoscopic sponges and metal composites)	
IT	13732-00-8DP, (3-Acryloxypropyl)methyldimethoxysi-lane, reaction products with dendrimers 16709-86-7DP, Chloromethyldimeth-ylvinylsilane, reaction products with dendrimers 74793-14-9DP, Iodomethyldimethylvinylsilane, reaction products with dendrimers 205180-56-9DP, reaction products with dendrimers	
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material	

use); PREP (Preparation); USES (Uses)
(dendrimer-based nanoscopic sponges and metal composites)
IT 61-73-4, ***Methylene*** ***blue*** 493-52-7, Methyl red
1306-23-6, Cadmium sulfide, miscellaneous 1317-40-4, Copper (II) sulfide
7440-06-4, Platinum, miscellaneous 7440-22-4, Silver, miscellaneous
7440-50-8, Copper, miscellaneous 7440-57-5, Gold, miscellaneous
14701-21-4, miscellaneous 14701-22-5, Ni²⁺, miscellaneous 15158-11-9,
Cu²⁺, miscellaneous 15438-31-0, Fe²⁺, miscellaneous 16065-89-7, Rh³⁺,
miscellaneous 16065-91-1, Au³⁺, miscellaneous 16812-54-7, Nickel (II)
sulfide 17493-86-6, Cu¹⁺, miscellaneous 20074-52-6, Fe³⁺,
miscellaneous 22537-48-0, Cd²⁺, miscellaneous

RL: MSC (Miscellaneous)
(dendrimer-based nanoscopic sponges and metal composites)
IT 26937-01-9DP, PAMAM, reaction products with acrylic ***silanes***
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(dendritic; dendrimer-based nanoscopic sponges and metal composites)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Hedstrand, D; US 5393795 A 1995 CAPLUS
- (2) Nycomed Salutar Inc; WO 9306868 A 1993 CAPLUS
- (3) Teroson; EP 0342411 A 1989 CAPLUS
- (4) Winnik, F; US 5120361 A 1992 CAPLUS

L12 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:960361 CAPLUS

DN 123:334324

ED Entered STN: 05 Dec 1995

TI Monitoring method of stain solution for particle analysis and calibration
method of particle analysis.

IN Miki, Taki; Yasuaki, Kojima

PA Hitachi, Ltd., Japan

SO Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G01N033-483

ICS G01N015-14

CC 9-4 (Biochemical Methods)

Section cross-reference(s): 14

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 678742	A2	19951025	EP 1995-105446	19950411
	EP 678742	A3	19960131		
	EP 678742	B1	20020724		
	R: DE, FR, GB				
	US 5728582	A	19980317	US 1995-423213	19950417
	JP 08005543	A2	19960112	JP 1995-92537	19950418
	JP 3261918	B2	20020304		
PRAI	JP 1994-82838	A	19940421		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 678742	ICM	G01N033-483	
	ICS	G01N015-14	
	IPCI	G01N0033-483 [ICM,6]; G01N0015-14 [ICS,6]	
	IPCR	G01N0015-14 [I,A]; G01N0015-14 [I,C]; G01N0033-50 [I,A]; G01N0033-50 [I,C]	
US 5728582	ECLA	G01N015/14H1; G01N033/50D	
	IPCI	G01N0031-22 [ICM,6]	
	IPCR	G01N0015-14 [I,A]; G01N0015-14 [I,C]; G01N0033-50 [I,A]; G01N0033-50 [I,C]	
	NCL	436/010.000; 436/008.000	
	ECLA	G01N015/14H1; G01N033/50D	
JP 08005543	IPCI	G01N0015-14 [ICM,6]; G01N0015-02 [ICS,6]; G01N0033-49 [ICS,6]	
	ECLA	G01N015/14H1	

AB Sample fluids, e.g., blood or urine, contg. biol. particles (e.g.,
sediment, bacteria, cells) are mixed with a stain soln., and the stained
biol. particles are fed into a flow-through cell. Still-frame images of
the particles flowing through the cell are photographed by a television

camera and are processed for particle classification. Prior to such processing of biol. particle images, a calibration coeff. is calcd. using ref. particles. The ref. particles comprise particles such as polystyrene resin which contain functional radicals such as sulfonic radicals and are stained by mixing a suspended fluid contg. these ref. particles with the stain soln. The calibration coeff. is calcd. according to information on stain in the still frame images, and is used to calibrate biol. particle data.

ST biol particle analysis stain monitoring calibration; flow cell particle analysis body fluid; television monitoring stain ref biol particle; body fluid sediment particle analysis stain

IT Amino group
 Bacteria
 Blood analysis
 Body fluid
 Carboxyl group
 Cell
 Erythrocyte
 Hydroxyl group
 Leukocyte
 Particles
 Staining, biological
 Stains, biological
 Television
 Urine analysis
 (monitoring of stain soln. for biol. particle anal. and calibration method)

IT Quaternary ammonium compounds, analysis
 Silanes
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (monitoring of stain soln. for biol. particle anal. and calibration method)

IT Functional groups
 (chloromethyl, monitoring of stain soln. for biol. particle anal. and calibration method)

IT Cytometry
 (flow, monitoring of stain soln. for biol. particle anal. and calibration method)

IT Functional groups
 (sulfo, monitoring of stain soln. for biol. particle anal. and calibration method)

IT 61-73-4, ***Methylene*** ***blue*** 16423-68-0, Erythrosin B
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (monitoring of stain soln. for biol. particle anal. and calibration method)

IT 100-42-5D, Styrene, copolymers 106-99-0D, Butadiene, copolymers
 1321-74-0D, Divinylbenzene, copolymers 9003-53-6, Polystyrene
 9003-55-8, Butadiene-styrene copolymer 9003-70-7, Divinylbenzene-styrene copolymer 9017-21-4D, Polyvinyltoluene, copolymers
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (monitoring of stain soln. for biol. particle anal. and calibration method)

L12 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1995:902719 CAPLUS
 DN 123:290054
 ED Entered STN: 08 Nov 1995
 TI Colored shiny opaque materials with a thin layer of colored glass gel formed by sol-gel process
 IN Sakai, Kazuo; Ueda, Tsutomu
 PA Mori Sadayoshi, Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09C003-06
 ICS C09C001-24; C09C001-30; C09C001-46; C09C001-62; C09C001-64
 CC 42-13 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07207186	A2	19950808	JP 1994-39020	19940124

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 07207186	ICM	C09C003-06
	ICS	C09C001-24; C09C001-30; C09C001-46; C09C001-62;
		C09C001-64
	IPCI	C09C0003-06 [ICM,6]; C09C0001-24 [ICS,6]; C09C0001-30 [ICS,6]; C09C0001-46 [ICS,6]; C09C0001-62 [ICS,6]; C09C0001-64 [ICS,6]

AB The title materials are formed by coating color-contg. metal oxide gel on the surface of Al flakes, glass flakes, bronze powder, graphite, iron oxide flakes, metal oxide-coated iron oxide, etc. C.I. Pigment Red 254 1, TSL8311 ***silane*** coupler 0.2, Et cellulose 0.8, and iso-PrOH 170 g were milled using 0.5-mm zircon beads to obtain a coating soln. which was mixed with Si(OEt)4 12, HCl 0.15, water 12, and EtOH 14 g, poured into an Al paste, mixed well, and heated at 90.degree. for 3 h to obtain a paste of red flakes with silvery luster.

ST pigment coating aluminum flake luster; sol gel process coating

IT Pigments

(colored shiny opaque materials with a thin layer of colored glass gel formed by sol-gel process)

IT Carbon black, uses

Glass, nonoxide

RL: TEM (Technical or engineered material use); USES (Uses)

(colored shiny opaque materials with a thin layer of colored glass gel formed by sol-gel process)

IT 61-73-4, ***Methylene*** ***blue*** 78-10-4, Tetraethyl silicate 81-88-9, Rhodamine B 147-14-8, C.I. Pigment Blue 15 682-01-9, Tetrapropyl silicate 1047-16-1, C.I. Pigment Violet 19 1328-53-6, C.I. Pigment Green 7 1332-37-2, Iron oxide, uses 5567-15-7, C.I. Pigment Yellow 83 7429-90-5, Aluminum, uses 7782-42-5, Graphite, uses 12597-70-5, Bronze 84632-65-5, C.I. Pigment Red 254

RL: TEM (Technical or engineered material use); USES (Uses)

(colored shiny opaque materials with a thin layer of colored glass gel formed by sol-gel process)

L12 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1994:620578 CAPLUS

DN 121:220578

ED Entered STN: 29 Oct 1994

TI Sensor membrane of an optical sensor for the determination of a physical or chemical parameter of a sample

IN Klimant, Ingo; Wolfbeis, Otto S.; Leiner, Marco Jean Pierre; Karpf, Marco Jean Pierre; Karpf, Hellfried; Kovacs, Barna

PA AVL Medical Instruments AG, Switz.

SO Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM G01N021-77

CC 79-2 (Inorganic Analytical Chemistry)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 578630	A1	19940112	EP 1993-890131	19930630
EP 578630	B1	19960221		
R: AT, DE, FR, GB				
AT 134443	E	19960315	AT 1993-890131	19930630
JP 06174642	A2	19940624	JP 1993-169297	19930708
PRAI AT 1992-1409	A	19920709		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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EP 578630	ICM	G01N021-77
	IPCI	G01N0021-77 [ICM,5]
	IPCR	C09K0011-06 [I,A]; C09K0011-06 [I,C]; G01N0021-77 [I,A]; G01N0021-77 [I,C]; G01N0031-22 [I,A]; G01N0031-22 [I,C]
AT 134443	ECLA	C09K011/06; G01N021/77B; G01N031/22
	IPCI	G01N0021-77 [ICM,6]
	IPCR	G01N0021-77 [I,A]; G01N0021-77 [I,C]

JP 06174642 IPCI G01N0021-77 [ICM,5]; G01N0021-64 [ICS,5]
AB In a sensor membrane contg. an indicator homogeneously immobilized in a polymer matrix, comprising a cationic or anionic dye mol. and .gtoreq.1 counter ion, the counter ion is derived from a compd. which contains an ionic group and (a) an oligomeric residue of the monomer forming the polymer matrix; (b) long-chain alkyl or alkylene groups; or (c)
silyl groups; the counter ion has phys.-chem. properties matching those of the polymer matrix, and the dye mol. is coupled to the polymer matrix by the counter ion.
ST membrane optical sensor; dye counter ion indicator optical sensor
IT pH
(detn. of, optical sensor membranes for)
IT Membranes
(for optical sensors, contg. dye-counter ion indicators)
IT Rubber, silicone, uses
RL: DEV (Device component use); USES (Uses)
(membranes from, contg. dye-counter ion indicators, for optical sensors)
IT Sensors
(optical, membrane for, contg. dye-counter ion indicators)
IT 124-38-9, Carbon dioxide, analysis 7446-09-5, Sulfur dioxide, analysis 7664-41-7, Ammonia, analysis 7722-84-1, Hydrogen peroxide, analysis 7782-44-7, Oxygen, analysis 12408-02-5, Hydrogen ion, analysis 14127-61-8, Calcium(2+), analysis 14280-50-3, Lead(2+), analysis 14797-55-8, Nitrate, analysis 16637-16-4, Uranyl ion (UO22+)
16887-00-6, Chloride, analysis 17341-24-1, Lithium(1+), analysis 17341-25-2, Sodium(1+), analysis 22537-22-0, Magnesium(2+), analysis 22537-39-9, Strontium(2+), analysis 22537-48-0, Cadmium(2+), analysis 22537-56-0, Thallium(1+), analysis 24203-36-9, Potassium(1+), analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, optical sensor membranes for)
IT 89935-39-7 158273-63-3 158273-64-4
RL: ANST (Analytical study)
(indicator, membranes contg., for optical sensors)
IT 61-73-4D, ***Methylene*** ***blue***, complexes with alkyl- or alkylenesulfonates 81-88-9D, Rhodamine B, functionalized with ionophors, complexes with alkyl- or alkyleneammonium 115-40-2D, Bromocresol purple, complexes with alkyl- or alkyleneammonium 130-95-0D, Quinine, complexes with alkyl- or alkylenesulfonates 522-75-8D, Thioindigo, sulfo, complexes with alkyl- or alkyleneammonium 1461-15-0D, Calcein, complexes with alkyl- or alkyleneammonium 2001-95-8D, Valinomycin, reaction product with Rhodamine B, complexes with alkyl- or alkyleneammonium 58801-34-6D, ETH 1001, reaction product with Rhodamine B, complexes with alkyl- or alkyleneammonium 58821-96-8D, ETH 149, reaction product with Rhodamine B, complexes with alkyl- or alkyleneammonium 61183-76-4D, ETH 227, reaction product with Rhodamine B, complexes with alkyl- or alkyleneammonium 70268-36-9D, ETH 1907, reaction product with Rhodamine B, complexes with alkyl- or alkyleneammonium 75513-72-3D, ETH 1117, reaction product with Rhodamine B, complexes with alkyl- or alkyleneammonium
RL: ANST (Analytical study)
(indicators, membranes contg., for optical sensors)
IT 9002-86-2, Polyvinyl chloride
RL: DEV (Device component use); USES (Uses)
(membranes from, contg. dye-counter ion indicators, for optical sensors)
IT 12408-02-5
RL: PRP (Properties)
(pH, detn. of, optical sensor membranes for)

L12 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:618137 CAPLUS
DN 117:218137
ED Entered STN: 28 Nov 1992
TI Coloring of glass by thin films
AU Atkarskaya, A. B.; Borul'ko, V. I.; Goikhman, V. Yu.; Dudnik, T. A.; Maricheva, L. I.; Popovich, S. A.; Yakubets, L. V.; Mukinets, I. V.
CS Russia
SO Stroitel'nye Materialy i Konstruktsii (1991), (4), 11-12
CODEN: SMKOD5; ISSN: 0136-7773
DT Journal
LA Russian

CC 57-1 (Ceramics)
 AB Coloring of glass sheets using thin SiO₂ and TiO₂ films and by using methyl red and violet, brilliant green, bromophenol red, chlorophenol red, thymol ***blue***, bromocresol purple, and ***methylene*** ***blue*** is reported. The optimum pH (1.2-6.8) was dependent on the dye nature. The SiO₂ film was prep'd. by hydrolysis of tetramethoxy ***silane***. The SiO₂ film had no effect on the light reflection and transmittance. The TiO₂ film increased the glass reflectance by 40%.
 ST glass coloring silica titania film
 IT Glass, oxide
 RL: USES (Uses)
 (coloring of, dyes and silica and titania films in)
 IT 7631-86-9, Silica, uses 13463-67-7, Titania, uses
 RL: USES (Uses)
 (coatings, glass coloring with dyes and)
 IT 61-73-4, ***Methylene*** ***blue*** 76-61-9, Thymol blue
 115-40-2, Bromocresol purple 493-52-7, Methyl red 633-03-4, Brilliant green 2800-80-8, Bromophenol red 4430-20-0, Chlorophenol red 8004-87-3, Methyl violet
 RL: USES (Uses)
 (in coloring of glass by thin films)

L12 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1990:120715 CAPLUS
 DN 112:120715
 ED Entered STN: 31 Mar 1990
 TI Coating compositions containing composite pigments
 IN Une, Hiroshi; Mitani, Katsuo
 PA Tokuyama Soda Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09D007-12
 ICS C08K009-02; C09C003-10
 CC 42-6 (Coatings, Inks, and Related Products)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01172476	A2	19890707	JP 1987-329825	19871228
PRAI JP 1987-329825				

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 01172476	ICM C09D007-12 ICS C08K009-02; C09C003-10 IPCI C09D0007-12 [ICM,4]; C08K0009-02 [ICS,4]; C09C0003-10 [ICS,4]	

AB Coating compns. of excellent pigment dispersion contain synthetic resins, coating aids, and a composite pigment [av. particle diam. a 50.0 .mu.m, particle dispersion value (definition given) >80%] comprising an inorg. core, dye or dye-inorg. compd. color layer, and optionally, a fixation coating layer of a ***silane*** or an organometallic compd. or a mixt. of either of these 2 latter compds. and a dye in a smaller amt. than in the color layer. A pigment (av. particle diam. 3.24 .mu.m, particle dispersion value 94.3%) was prep'd. comprising SiO₂ core, 1.2% Diacryl Red MS-N dye layer, and PhSi(OEt)₃ surface treatment. A compn. from phenolic novolak 20, drying oil 20, and this composite pigment 60% provided coatings with excellent lightfastness.
 ST inorg org composite pigment coating; phenolic resin coating composite pigment; silica composite pigment coating; ***silane*** phenyldiethoxy composite pigment coating
 IT Coupling agents
 (inorg.-org. composite pigments treated with, for coatings)
 IT Pigments
 (manuf. of lightfast inorg.-org. two-layered composite, for coatings)
 IT 9003-20-7, Poly(vinyl acetate) 9003-22-9, Vinyl acetate-vinyl chloride copolymer 9003-55-8, Butadiene-styrene copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, water-thinned, composite pigments for)
 IT 546-93-0, Magnesium carbonate 1314-23-4, Zirconia, uses and miscellaneous 1344-28-1, Alumina, uses and miscellaneous 7631-86-9,

Silica, uses and miscellaneous 13463-67-7, Titania, uses and
 miscellaneous
 RL: USES (Uses)
 (cores, in composite pigments, for coatings)
 IT 78-10-4, Tetraethylsilicate 1071-76-7, Tetrabutyl zirconate 2269-22-9
 5593-70-4
 RL: USES (Uses)
 (hydrolyzers of, for manuf. of cores for composite pigments)
 IT 61-73-4, ***Methylene*** ***blue*** 569-64-2 573-58-0, Congo
 red 12224-27-0, Mikawhite ATN 12227-55-3, C.I. Solvent Red 122
 12237-24-0, Oleosol fast blue GL 56509-74-1, Diacryl Red MS-N
 116134-22-6, Dia Cotton Red GS 116134-55-5, Sumiacryl Red N-G
 116134-56-6, Sumifix blue RSL 125054-01-5, Mikacion Blue LGS
 RL: USES (Uses)
 (inorg.-org. composite pigments contg., lightfast, for coatings)
 IT 75-77-4, Trimethylchlorosilane, uses and miscellaneous 75-78-5,
 Dimethyldichlorosilane 144-79-6 780-69-8, Phenyltrithoxysilane
 999-97-3, Hexamethyldisilazane 1825-62-3, Trimethylethoxysilane
 5314-55-6, Ethyltrimethoxysilane 14049-36-6, Chlorotrifluorosilane
 61417-52-5 61417-55-8 74428-80-1 87133-45-7 125063-23-2
 RL: USES (Uses)
 (inorg.-org. composite pigments treated with, for coatings)

L12 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1988:226903 CAPLUS
 DN 108:226903
 ED Entered STN: 24 Jun 1988
 TI Manufacture of (meth)acrylate ester for use in dental materials
 IN Reiners, Juergen; Podszun, Wolfgang; Winkel, Jens
 PA Bayer A.-G., Fed. Rep. Ger.
 SO Ger. Offen., 14 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C07C125-077
 ICS C07C069-54; A61K006-08; C08F020-36; C08F020-26
 CC 63-7 (Pharmaceuticals)
 Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3703080	A1	19880128	DE 1987-3703080	19870203
	EP 254950	A2	19880203	EP 1987-110144	19870714
	EP 254950	A3	19880921		
	EP 254950	B1	19911016		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	AT 68468	E	19911115	AT 1987-110144	19870714
	ES 2026870	T3	19920516	ES 1987-110144	19870714
	JP 63035542	A2	19880216	JP 1987-181284	19870722
	JP 2588534	B2	19970305		
	JP 08245512	A2	19960924	JP 1996-67439	19960229
PRAI	DE 1986-3625203	A1	19860725		
	DE 1987-3703080	A	19870203		
	EP 1987-110144	A	19870714		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3703080	ICM	C07C125-077	
	ICS	C07C069-54; A61K006-08; C08F020-36; C08F020-26	
	IPCI	C07C0125-077 [ICM,4]; C07C0069-54 [ICS,4]; A61K0006-08 [ICS,4]; C08F0020-36 [ICS,4]; C08F0020-26 [ICS,4]	
	IPCR	A61K0006-02 [I,C]; A61K0006-083 [I,A]; A61K0006-09 [I,A]; C08F0022-00 [I,C]; C08F0022-10 [I,A]	
EP 254950	IPCI	C07C0069-54 [ICM,4]; C07C0125-077 [ICS,4]; A61K0006-08 [ICS,4]; C08F0020-28 [ICS,4]; C07C0067-08 [ICS,4]; C08G0018-10 [ICS,4]	
	IPCR	A61K0006-02 [I,C]; A61K0006-083 [I,A]; A61K0006-09 [I,A]; C08F0022-00 [I,C]; C08F0022-10 [I,A]	
AT 68468	IPCI	C07C0069-54 [ICM,5]; C07C0271-06 [ICS,5]; A61K0006-08 [ICS,5]; C08F0020-28 [ICS,5]; C07C0067-08 [ICS,5]; C08G0018-10 [ICS,5]	
	IPCR	A61K0006-02 [I,C]; A61K0006-08 [I,A]; C07C0067-00	

[I,C]; C07C0067-08 [I,A]; C07C0069-00 [I,C];
 C07C0069-54 [I,A]; C07C0271-00 [I,C]; C07C0271-06
 [I,A]; C08F0020-00 [I,C]; C08F0020-28 [I,A];
 C08G0018-00 [I,C]; C08G0018-10 [I,A]
 ES 2026870 IPCI C07C0069-54 [ICM,5]; C07C0271-06 [ICS,5]; A61K0006-08
 [ICS,5]; C08F0020-28 [ICS,5]; C07C0067-08 [ICS,5];
 C08G0018-10 [ICS,5]
 JP 63035542 IPCI C07C0069-54 [ICM,4]; A61K0006-08 [ICS,4]; C07C0125-06
 [ICS,4]
 IPCR A61K0006-02 [I,C]; A61K0006-083 [I,A]; A61K0006-09
 [I,A]; C08F0022-00 [I,C]; C08F0022-10 [I,A]
 JP 08245512 IPCI C07C0069-54 [ICM,6]; A61K0006-083 [ICS,6]; C07C0271-22
 [ICS,6]; C08F0020-28 [ICS,6]; C08F0020-36 [ICS,6]
 AB New (meth)acrylate esters are prep'd. by the reaction of polyols with
 (meth)acrylic acid, (meth)acrylic acid derivs. or isocyanate group-contg.
 (meth)acrylates. These compds. can be used as photo-polymerizable dental
 materials. The reaction product of 1 mol pentaerythritol, and 4.9 mol
 propylene oxide, was dissolved in 300 mM toluene, p-toluenesulfonic acid
 1.5, 2,6-di-tert-butyl-4-methylphenol 0.064, ***methylene***
 blue 0.45, and methacrylic acid 103.2 g added. The mixt. was
 bubbled with air and heated for 40 h at 110-120.degree., forming a
 methacrylate ester intermediate. This intermediate (18.3 g) was dissolved
 in the 50 mL dried CHCl₃, 0.02 g ionol and 0.1 g di-Bu Sn diborate added,
 and 27 g 2-isocyanatoethyl methacrylate slowly dripped in. The mixt. was
 stirred at 50.degree. for .apprx.150 h, and the methacrylate-substituted
 polyurethane isolated as a viscous liq. Artificial teeth were prep'd. from
 60 parts of a monomer mixt., as triethylene glycol dimethacrylate 45, the
 methacrylate-substituted polyurethane 55, dibenzoyl peroxide 1, and 5%
 3-methacryloyloxypropyltrimethoxysilane-silanized highly disperse silica
 40 parts which had been thoroughly mixed, was poured into small tooth mold
 and cured for 6 min at 130.degree., producing plastic dentures having high
 abrasion resistance.
 ST methacrylate polyurethane prep'n dental material
 IT Coating materials
 (for teeth, polyurethane methacrylates as, manuf. of)
 IT Dental materials and appliances
 (polyurethane methacrylate esters for, manuf. of)
 IT Dental materials and appliances
 (dentures, polyurethane methacrylate esters for, manuf. of)
 IT Dental materials and appliances
 (fillings, polyurethane methacrylate esters for, manuf. of)
 IT Urethane polymers, biological studies
 RL: BIOL (Biological study)
 (methacrylates, manuf. of, for dental materials)
 IT 77-58-7, Dibutyltin dilaurate
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, in manuf. of polyurethane methacrylate dental materials)
 IT 109-16-0DP, Triethyleneglycoldimethacrylate, polymers with methacrylate
 ester urethanes 30674-80-7DP, 2-Isocyanatoethyl methacrylate, urethane
 with propoxylated pentaerythritol methacrylate esters, polymers with
 triethylene glycol dimethacrylate
 RL: PREP (Preparation)
 (prepn. of, for dental materials)
 IT 75-56-9DP, Propylene oxide, reaction products with pentaerythritol, esters
 with methacrylic acid 79-41-4DP, Methacrylic acid, esters with
 propoxylated pentaerythritol, urethane with isocyanatoethyl methacrylate
 115-77-5DP, Pentaerythritol, reaction products with propylene oxide,
 esters with methacrylic acid
 RL: PREP (Preparation)
 (prepn. of, for polyurethane methacrylate dental materials)
 IT 7631-86-9, biological studies
 RL: BIOL (Biological study)
 (***silane*** -treated, filling for polyurethane methacrylate dental
 materials)

L12 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1987:50017 CAPLUS
 DN 106:50017
 ED Entered STN: 21 Feb 1987
 TI Trans-Decalin derivatives
 IN Ikegami, Shiro; Hashimoto, Shunichi; Sakata, Shinji
 PA Yamasa Shoyu Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07D307-92
 ICA A61K007-46; C07C049-427; C07C049-623; C07F007-08
 CC 27-6 (Heterocyclic Compounds (One Hetero Atom))

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61204178	A2	19860910	JP 1985-44453	19850306
PRAI JP 1985-44453		19850306		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61204178	ICM	C07D307-92
	ICA	A61K007-46; C07C049-427; C07C049-623; C07F007-08
	IPCI	C07D0307-92 [ICM,4]; A61K0007-46 [ICA,4]; C07C0049-427 [ICA,4]; C07C0049-623 [ICA,4]; C07F0007-08 [ICA,4]

GI

/ Structure 4 in file .gra /

AB trans-Decalin derivs. I (R = alkyl, ***silyl***), useful as
 intermediates for antihypertensive Forskolin, are prep'd. Thus, heating a
 7:3 mixt. of (E,E)- and (E,Z)-II in MePh and trace amt. ***Methylene***
 Blue in a sealed tube at 230.degree. gave 59% I (R = Me).
 ST Decalin furo Forskolin intermediate; furodecalin Forskolin intermediate;
 Forskolin intermediate furodecalin
 IT 66575-29-9, Forskolin
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (intermediates for, furodecalinone derivs. as)
 IT 106221-45-8P 106221-46-9P 106221-47-0P 106221-48-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. and cyclization of)
 IT 106221-50-5P 114375-37-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as Forskolin intermediate)

L12 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1986:68676 CAPLUS

DN 104:68676

ED Entered STN: 08 Mar 1986

TI Milbemycin derivatives for controlling animal and plant pests

IN Gehret, Jean Claude

PA Ciba-Geigy A.-G. , Switz.

SO Eur. Pat. Appl., 32 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM C07D493-22

ICS A01N043-24; A61K031-355

ICI C07D493-22, C07D313-00, C07D311-00, C07D307-00

CC 26-6 (Biomolecules and Their Synthetic Analogs)

Section cross-reference(s): 5

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 144285	A1	19850612	EP 1984-810519	19841029
EP 144285	B1	19881026		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
US 4582852	A	19860415	US 1984-664677	19841025
AT 38230	E	19881115	AT 1984-810519	19841029
IL 73384	A1	19880131	IL 1984-73384	19841031
CA 1257586	A1	19890718	CA 1984-466670	19841031
DK 8405199	A	19850503	DK 1984-5199	19841101
AU 8434907	A1	19850509	AU 1984-34907	19841101
AU 575871	B2	19880811		
ZA 8408534	A	19850626	ZA 1984-8534	19841101

JP 60120880	A2	19850628	JP 1984-229065	19841101
JP 05064154	B4	19930914		
PRAI CH 1983-5909	A	19831102		
CH 1984-4736	A	19841002		
EP 1984-810519	A	19841029		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 144285	ICM	C07D493-22
	ICS	A01N043-24; A61K031-355
	ICI	C07D493-22, C07D313-00, C07D311-00, C07D307-00
	IPCI	C07D0493-22 [ICM,4]; A01N0043-24 [ICS,4]; A61K0031-355 [ICS,4]; C07D0493-22 [ICI,4]; C07D0313-00 [ICI,4]; C07D0311-00 [ICI,4]; C07D0307-00 [ICI,4]
	IPCR	A01N0043-90 [I,A]; A01N0043-90 [I,C]; A01N0055-00 [I,A]; A01N0055-00 [I,C]; C07H0019-00 [I,C]; C07H0019-01 [I,A]
US 4582852	IPCI	C07D0495-20 [ICM,4]; C07D0495-22 [ICS,4]; A01N0043-22 [ICS,4]; A61K0031-365 [ICS,4]
	IPCR	A01N0043-90 [I,A]; A01N0043-90 [I,C]; A01N0055-00 [I,A]; A01N0055-00 [I,C]; C07H0019-00 [I,C]; C07H0019-01 [I,A]
AT 38230	NCL	514/450.000; 549/264.000; 549/265.000
	IPCI	C07D0493-22 [ICM,4]; A01N0043-24 [ICS,4]; A61K0031-355 [ICS,4]; C07D0493-22 [ICI,4]; C07D0313-00 [ICI,4]; C07D0311-00 [ICI,4]; C07D0307-00 [ICI,4]
	IPCR	A01N0043-02 [I,C]; A01N0043-24 [I,A]; A61K0031-352 [I,C]; A61K0031-355 [I,A]; C07D0493-00 [I,C]; C07D0493-22 [I,A]
IL 73384	IPCI	C07D0493-22 [ICM,4]; C07F0007-18 [ICS,4]; A01N0043-90 [ICS,4]; A01N0055-00 [ICS,4]; A61K0031-365 [ICS,4]; A61K0031-395 [ICS,4]
CA 1257586	IPCI	A01N0043-90 [ICM,4]
	IPCR	A01N0043-90 [I,A]; A01N0043-90 [I,C]; A01N0055-00 [I,A]; A01N0055-00 [I,C]; C07H0019-00 [I,C]; C07H0019-01 [I,A]
DK 8405199	IPCI	C07D [ICM,4]; C07F [ICS,4]; A01N [ICS,4]
AU 8434907	IPCI	A01N0043-16 [ICM,3]; A61K0031-365 [ICS,3]; C07D0493-22 [ICS,3]
	IPCR	A01N0043-90 [I,A]; A01N0043-90 [I,C]; A01N0055-00 [I,A]; A01N0055-00 [I,C]; C07H0019-00 [I,C]; C07H0019-01 [I,A]
ZA 8408534	IPCI	C07D [ICM,4]; A01N [ICS,4]; C07G [ICS,4]
JP 60120880	IPCI	C07D0493-22 [ICM,4]; A01N0043-90 [ICS,4]; A61K0031-35 [ICS,4]; C07D0493-22 [ICI,4]; C07D0307-00 [ICI,4]; C07D0311-00 [ICI,4]; C07D0313-00 [ICI,4]

OS MARPAT 104:68676

GI

/ Structure 5 in file .gra /

AB Milbemycin derivs. I [X = CH(OR1), CO; X1 = C(:CH2)CH(OH)CH2, C(OH)MeCH:CH; R1 = H, ***silyl***, acyl; R2 = Me, Et, CHMe2, sec-Bu], useful as insecticides, acaricides, and nematocides, were prep'd. via oxidn. with singlet oxygen. A soln. of 5.56 g milbemycin D and 0.03 g ***methylene*** ***blue*** in MeCN was irradiated with O2 addn. at 20.degree. 10 h and the reaction mixt. reduced with 3.9 g Ph3P at 20.degree. to give 4.10 g I [X = CH(OH-.beta.), X1 = C(:CH2)CH(OH)CH2, R2 = CHMe2] (II) and 0.34 g I [X = C(OH)MeCH:CH, X1 and R2 the same] (III). II and III gave 100% kill of Spodoptera littoralis at 12.5 ppm after 24 h.

ST insecticide milbemycin prep'n; acaricide milbemycin prep'n; nematocide milbemycin prep'n; parasiticide milbemycin prep'n; pesticide milbemycin prep'n

IT Acaricides
Insecticides
Nematocides
Parasiticides
Pesticides
(milbemycin derivs.)

IT Oxidation

. (of milbemycin derivs. with singlet oxygen)
 IT 100107-65-1
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
 (acaricidal activity of)
 IT 99718-32-8
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
 (insecticidal activity of)
 IT 51596-11-3 71827-03-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidn. of, with singlet oxygen)
 IT 77855-81-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (oxidn. or acetylation of)
 IT 99718-05-5P 99718-06-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and oxidn. of, with manganese dioxide)
 IT 83471-32-3P 87616-38-4P 99718-12-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and oxidn. of, with singlet oxygen)
 IT 99718-07-7P 99718-08-8P 99718-09-9P 99718-10-2P 99718-11-3P
 99718-15-7P 99718-16-8P 99718-19-1P 99718-20-4P 99718-23-7P
 99718-24-8P 99718-25-9P 99718-26-0P 99718-27-1P 99718-28-2P
 99718-29-3P 99718-30-6P 99718-31-7P 99732-80-6P
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. and pesticidal activity of)
 IT 99718-13-5P 99718-14-6P 99718-17-9P 99718-18-0P 99718-21-5P
 99718-22-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn., desilylation, and pesticidal activity of)
 IT 18162-48-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (silylation by, of milbemycin A3)
 IT 51596-10-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (silylation of, with tert-butylchlorodimethylsilane)

L12 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1984:543127 CAPLUS
 DN 101:143127
 ED Entered STN: 13 Oct 1984
 TI Determination of trace boron in trichlorosilane
 AU Lin, Chen Yeh; Chang, Fu Chung; Yeh, Yu Chai; Wu, Shaw Chii
 CS Inst. Nucl. Energy Res., Lungtan, Taiwan
 SO Huaxue (1982), 40(4), 133-9
 CODEN: HUHSA2; ISSN: 0441-3768
 DT Journal
 LA Chinese
 CC 79-6 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 78
 AB Trace B was detd. in SiHCl₃ by inductively-coupled plasma (ICP) emission spectrometry and spectrophotometry. The detection limit for B is 2 ppb in the ICP emission spectrometric method. In the spectrophotometric method, the SiHCl₃ sample is hydrolyzed in the presence of 1% mannitol, and then the hydrolysis product is dissolved in 20% HF and heated to dryness. The solid is dissolved in aq. NH₄F contg. 1.5M H₂SO₄ and then
 methylene ***blue*** reagent is added to form a colored complex. The complex is extd. with 1,2-dichloroethane and it has max. absorption at 660 nm. Beer's law is obeyed for 0-2.0 .mu.g B/25 mL and the molar absorptivity is 1.95 .times. 10⁴ L mol⁻¹ cm⁻¹. The removal of B impurity in HF and the hydrolysis of SiHCl₃ are also discussed.
 ST boron detn emission spectrometry spectrophotometry; spectrophotometry trace boron detn; emission spectrometry trace boron detn; ***silane*** trichloro analysis trace boron; hydrogen fluoride removal boron impurity; hydrolysis trichlorosilane; ***methylene*** ***blue*** reagent

. boron detn; extn spectrophotometry trace boron detn; trichlorosilane
 analysis trace boron
 IT Hydrolysis
 (of trichlorosilane)
 IT 10025-78-2
 RL: ANST (Analytical study)
 (boron trace detn. in, by extn.-spectrophotometry and
 inductively-coupled plasma emission spectrometry)
 IT 7440-42-8, analysis
 RL: ANST (Analytical study)
 (detn. of trace, in trichlorosilane, by extn.-spectrophotometry and
 inductively-coupled plasma emission spectrometry)
 IT 61-73-4
 RL: ANST (Analytical study)
 (in detn. of boron traces, by extn. and spectrophotometry)
 IT 7664-39-3P, preparation
 RL: PUR (Purification or recovery); PREP (Preparation)
 (purifn. of, boron removal in)

L12 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1984:140656 CAPLUS
 DN 100:140656
 ED Entered STN: 12 May 1984
 TI Rubber composition
 IN Weber, Kenneth Earl; Mukamal, Harold
 PA Standard Oil Co., USA
 SO Eur. Pat. Appl., 60 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC C08K003-34; C08K005-19; C08K005-34; C08K005-54; C08L021-00
 CC 39-9 (Synthetic Elastomers and Natural Rubber)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 99710	A1	19840201	EP 1983-304000	19830708
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4431755	A	19840214	US 1982-398994	19820716
	CA 1220296	A1	19870407	CA 1983-431839	19830705
	JP 59027933	A2	19840214	JP 1983-127072	19830714
PRAI	US 1982-398994	A	19820716		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 99710	IC	C08K003-34; C08K005-19; C08K005-34; C08K005-54; C08L021-00	
	IPCI	C08K003-34; C08K0005-19; C08K0005-34; C08K0005-54; C08L0021-00	
	IPCR	C08K0003-00 [I,C]; C08K0003-34 [I,A]; C08K0005-00 [I,C]; C08K0005-19 [I,A]; C08K0005-54 [I,A]; C08K0009-00 [I,C]; C08K0009-06 [I,A]	
US 4431755	IPCI	C08L0009-06; C08K0003-36; C08K0005-17	
	IPCR	C08K0003-00 [I,C]; C08K0003-34 [I,A]; C08K0005-00 [I,C]; C08K0005-19 [I,A]; C08K0005-54 [I,A]; C08K0009-00 [I,C]; C08K0009-06 [I,A]	
	NCL	523/203.000; 523/212.000; 523/213.000; 523/216.000; 523/333.000; 523/334.000; 524/447.000; 524/449.000; 524/450.000; 524/451.000; 524/571.000; 524/575.000	
CA 1220296	IPCI	C08K0005-54 [ICM,4]; C08K0003-34 [ICS,4]; C08L0007-00 [ICS,4]; C08L0021-00 [ICS,4]	
	IPCR	C08K0003-00 [I,C]; C08K0003-34 [I,A]; C08K0005-00 [I,C]; C08K0005-19 [I,A]; C08K0005-54 [I,A]; C08K0009-00 [I,C]; C08K0009-06 [I,A]	
JP 59027933	IPCI	C08L0021-02; C08K0003-34; C08K0005-17; C08K0005-54	

OS MARPAT 100:140656
 AB A rubber compn. comprises a substantially uniformed dispersion in natural
 or synthetic rubber of 5-200 phr phyllosilicate mineral particles
 (preferably talc) having a mean particle size 0.01-20 .mu., 0.05-15 phr an
 organosilane having functional groups capable of bonding to the mineral
 and the rubber, and 0.005-15 phr quaternary ammonium salt. Thus, 100 wt.
 parts SBR 1502 rubber was mixed with 5 phr ZnO, 1 phr stearic acid, and 1
 phr phenolic antioxidant and repeatedly milled. The rubber sheet was

allowed to form a band in the mill, and compounded with 10 phr process oil, 0.38-2.25 phr quaternary ammonium salt, e.g., 1-methyl-1-oleylamidoethyl-2-oleylimidazolinium Me sulfate [89551-60-0], tallowtrimethylammonium chloride, dimethylditallow ammonium chloride, ***methylene*** ***blue*** [61-73-4], toluidine ***blue*** [92-31-9], or safranine O [477-73-6], and an adduct of 75 phr talc (mean particle size 1.8 .mu. and sp. surface area 16 m²/g) and 0.38-1.5 phr ***silane***, e.g., [3-(methacryloxy)propyl]trimethoxysilane [2530-85-0], bis[3-(triethoxysilyl)propyl] tetrasulfide [40372-72-3], or (3-aminopropyl)triethoxysilane [919-30-2]. The rubber was remilled, allowed to cool, and compounded with 3 phr S and 0.75 phr Altax accelerator. The remilled sheets were vulcanized at 160.degree. by compression molding. An improvement in certain properties was obsd. for some combinations of organosilane with quaternary ammonium salt relative to their values for rubber compns. contg. the organosilane alone at concn. equiv. to the combined concns. of both the organosilane and the quaternary ammonium salt. For other combinations of organosilane and quaternary ammonium salt, the properties were essentially the same as those of rubber compns. contg. the organosilane alone at concn. equiv. to the combined concns. of both organosilane and quaternary ammonium salt.

ST SBR physicomech property compounding; quaternary ammonium salt SBR property; phyllosilicate SBR compn; alkoxy silane SBR property; tallow ammonium salt SBR property; ***methylene*** ***blue*** SBR property; toluidine blue SBR property; safranine SBR property; talc SBR compn

IT Coupling agents
(alkoxysilanes, for phyllosilicate-filled rubbers)

IT Quaternary ammonium compounds, uses and miscellaneous
RL: USES (Uses)

(dimethylditallow and tallowtrimethyl, rubber contg. phyllosilicate mineral filler, alkoxy silane and, physicomech. properties of)

IT Rubber, butadiene-styrene, properties

Rubber, natural, properties

RL: PRP (Properties)
(physicomech. properties of phyllosilicate mineral-filled, compounding effect on)

IT 61-73-4 92-31-9 477-73-6 89551-60-0

RL: USES (Uses)
(rubber contg. alkoxy silane, phyllosilicate mineral particles and, physicomech. properties of vulcanized)

IT 2530-85-0

RL: USES (Uses)
(rubber contg. phyllosilicate mineral particles, quaternary ammonium salt and, physicomech. properties of vulcanized)

IT 919-30-2 40372-72-3

RL: USES (Uses)
(rubber contg. phyllosilicate mineral particles, quaternary ammonium salt and, physicomech. properties of vulcanized)

IT 14807-96-6, properties

RL: PRP (Properties)
(rubber filled by, physicomech. properties of vulcanized, compounding effect on)

IT 9003-55-8

RL: PRP (Properties)
(rubber, butadiene-styrene; physicomech. properties of phyllosilicate mineral-filled, compounding effect on)

L12 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1979:14666 CAPLUS

DN 90:14666

ED Entered STN: 12 May 1984

TI Photooxidizable compositions for lithographic plates

IN Breslow, David Samuel; Simpson, David Alexander

PA Hercules Inc., USA

SO Belg., 35 pp. Addn. to Belg. 820,855.

CODEN: BEXXAL

DT Patent

LA French

IC G03C

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 3

PATENT NO. KIND DATE APPLICATION NO. DATE

PI	BE 860611	A4	19780508	BE 1977-182452	19771108
	CA 1110899	A1	19811020	CA 1977-282647	19770713
	GB 1560304	A	19800206	GB 1977-34625	19770818
	FR 2370302	A2	19780602	FR 1977-30996	19771014
	FR 2370302	B2	19830128		
	US 4272610	A	19810609	US 1980-122162	19800219
	US 4271259	A	19810602	US 1980-158198	19800611
PRAI	US 1976-739928	A	19761108		
	US 1977-758746		19770112		
	US 1973-405192	A2	19731010		
	US 1975-644237	A2	19751224		
	US 1978-912154	A1	19780602		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
BE 860611	IC	G03C
	IPCI	G03C
CA 1110899	IPCI	G03C0001-00; G03C0001-72
	IPCR	G03F0007-027 [I,A]; G03F0007-027 [I,C]
GB 1560304	IPCI	G03C0001-00; G03C0001-68; G03C0001-71
	IPCR	G03F0007-027 [I,A]; G03F0007-027 [I,C]
FR 2370302	IPCI	G03C0001-71; C08F0002-48
	IPCR	G03F0007-027 [I,A]; G03F0007-027 [I,C]
US 4272610	IPCI	G03C0001-68
	IPCR	G03F0007-027 [I,A]; G03F0007-027 [I,C]
	NCL	430/302.000; 430/281.100; 430/283.100; 430/286.100; 430/288.100; 430/306.000; 430/311.000
US 4271259	IPCI	G03C0001-68
	IPCR	G03F0007-027 [I,A]; G03F0007-027 [I,C]; G03F0007-029 [I,A]; G03F0007-029 [I,C]
	NCL	430/286.100; 430/281.100; 430/283.100; 430/288.100; 522/066.000; 522/088.000; 522/107.000; 522/117.000; 522/121.000; 522/167.000; 522/182.000; 522/183.000

GI

/ Structure 6 in file .gra /

AB Photopolymer compns. contg. a polymerizable ethylenically unsatd. monomer, photooxidizable (peroxide-forming) olefinic-group-contg. compd., a viscosity-regulating satd. polymer, a peroxide-decomp. catalyst such as a transition metal compd., and a photooxygenation sensitizing agent such as ***methylene*** ***blue*** are used to prep. printing plates and photoresists. Thus, a coating compn. comprised of hydroxyporpyl cellulose 100, pentaerythritol triacrylate 75, photooxidizable I 23, Rose Bengal 4.3 mg, and anhyd. EtOH 11 mL was coated on a ***silane*** -compd.-subbed grained Al sheet to a dry thickness of 3 .mu., imagewise exposed (Sylvania R32 lamp of 375 W, 60 cm distance), degassed under vacuum using N, treated with a degassed catalyst soln. of vanadium oxyacetylacetone in benzene under N atm. for .apprx.30 min, and developed by water-washing to give a polymer image in the exposed areas and bared Al in the nonexposed areas.

ST photopolymer compn printing plate; photoresist photopolymer compn

IT Naphthenic acids, compounds

IT RL: PREP (Preparation)

(cobalt salt, photopolymerizable compn. contg., for printing plate and photoresist prepn.)

IT Rubber, natural, uses and miscellaneous

IT RL: PREP (Preparation)

(photopolymerizable compn. contg., for printing plate and photoresist prepn.)

IT Printing plates

(photopolymerizable compn. for prepn. of, contg. ethylenically unsatd. monomer and photooxidizable olefinic-group-contg. compd.)

IT Rubber, synthetic

IT RL: PREP (Preparation)
(ethylene-ethylidene-norbornene-propene, photopolymerizable compn. contg., for printing plate and photoresist prepn.)

IT Resists

(photo-, photopolymerizable compn. for prepn. of, contg. ethylenically unsatd. monomer and photooxidizable olefinic-group-contg. compd.)

IT Photoimaging compositions and processes
 (photopolymerizable, contg. ethylenically unsatd. monomer and
 photooxidizable olefinic-group-contg. compd.)

IT 110-26-9 513-81-5D, reaction products with Bisphenol A-propylene
 oxide-fumaric acid polymer 3153-26-2 3524-68-3 9004-64-2
 14024-18-1 14074-80-7 26793-34-0 39382-25-7D, reaction products with
 dimethylbutadiene 57100-44-4 68658-27-5 68987-31-5
 RL: USES (Uses)
 (photopolymerizable compn. contg., for printing plate and photoresist
 prepn.)

L12 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1976:38366 CAPLUS

DN 84:38366

ED Entered STN: 12 May 1984

TI Indicators covalently bound to insoluble carriers

IN Harper, Gerald B.

PA Can.

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

IC G01N

INCL 023253000TP

CC 79-3 (Inorganic Analytical Chemistry)

Section cross-reference(s): 57

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3904373	A	19750909	US 1973-409876	19731026
PRAI US 1973-409876	A	19731026		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 3904373	IC G01N	
	INCL 023253000TP	
	IPCI G01N0029-02; G01N0031-00; G01N0033-00	
	IPCR G01N0031-22 [I,A]; G01N0031-22 [I,C]	
	NCL 422/057.000; 436/166.000; 436/169.000	

AB Indicators insolubilized by covalent bonding to inorg. carriers, such as glass stirring rods, do not contaminate the soln. tested and may be used repeatedly. They replace the indicator test papers. The indicator and the carrier are coupled via a ***silane*** coupling agent, whose Si part has an affinity for inorg. materials and the org. part is an indicator or can be chem. modified to form an indicator. The coupling agent is combined with the indicator via an alkyl, azo, or sulfonamide link. The general formula of the coupling agent is XnSiR(4-n), where X is an alkyl, aryl, or aryl-alkyl, R is an alkoxy, aryloxy, or a halogen group, and n is 1, 2, or 3. The carrier is a glass, ZrO₂-coated glass, or a metal oxide, e.g. NiO. The indicator is a N,N-dialkylaniline, triarylmethyl compd. (e.g. phenolphthalein), 2-naphthol deriv. (e.g. Eriochrome Black T), or ***methylene*** ***blue***.

ST indicator insolubilizing; ***silane*** coupling carrier indicator; glass bound indicator; oxide bound indicator; arom amine indicator insolubilized; phenol indicator insolubilized

IT Glass

Oxides, uses and miscellaneous

RL: ANST (Analytical study)

(acid-base indicators covalently bound to)

IT Indicators

(acid-base, covalently bound to insol. carriers)

IT 42833-84-1D, Benzoyl chloride, 2,4,6-trimethoxy-, reaction products with aminopropylethoxysilylated glass

RL: RCT (Reactant); RACT (Reactant or reagent)

(coupling of, with diazotized Eriochrome Black T, in fabrication of acid-base indicator sticks)

IT 58698-88-7D, ***Silane***, triethoxy[(2,4,6-trimethoxyphenyl)methyl]-, reaction products with glass

RL: RCT (Reactant); RACT (Reactant or reagent)

(coupling of, with diazotized aminomethylaniline)

IT 919-30-2D, 1-Propanamine, 3-(triethoxysilyl)-, reaction products with glass, aminobenzoyl derivs. 16106-38-0D, Benzoyl chloride, 4-amino-,

- reaction products with aminopropylethoxysilylated glass
RL: PRP (Properties)
(diazotization and coupling of, with indicators, in fabrication of acid-base indicator sticks)
- IT 94-10-0DP, 1,3-Benzenediamine, 4-[(4-ethoxyphenyl)azo]-, reaction products with isothiocyanopropylethoxysilylated nickel oxide 125-31-5DP, Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis[2,5-dimethyl-, S,S-dioxide, reaction products with aminopropylethoxysilylated glass 272-18-4DP, 3H-2,1-Benzoxathiole, phenol deriv., reaction products with aminopropylethoxysilylated glass 1313-99-1DP, Nickel oxide (NiO), isothiocyanopropylethoxysilylated, reaction products with ethoxazene 1787-61-7DP, 1-Naphthalenesulfonic acid, 3-hydroxy-4-[(1-hydroxy-2-naphthalenyl)azo]-7-nitro-, monosodium salt, diazotized, reaction products with methoxybenzoylaminopropylethoxysilylated glass 2321-07-5DP, Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-, reaction products with aminopropylethoxysilylated glass 2836-04-6DP, 1,3-Benzenediamine, N,N-dimethyl-, diazotized, reaction products with methoxybenzylethoxysilylated glass 58882-63-6DP, 3H-2,1-Benzoxathiole-6-carboxylic acid, 3,3-bis(4-hydroxyphenyl)-, 1,1-dioxide, reaction products with aminopropylethoxysilylated glass
RL: PREP (Preparation)
(in acid-base indicator stick prepn.)
- IT 61-73-4D, Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride, reaction products with diazotized aminobenzoylaminopropyltriethoxysilylated glass 77-09-8D, 1(3H)-Isobenzofuranone, 3,3-bis(4-hydroxyphenyl)-, reaction products with diazotized aminobenzoylaminopropyltriethoxysilylated glass 121-69-7D, Benzenamine, N,N-dimethyl-, reaction products with diazotized aminobenzoylaminopropyltriethoxysilylated glass
RL: ANST (Analytical study)
(in acid-base indicator sticks)
- IT 10025-78-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with acids)
- IT 570-02-5 58882-63-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chlorosilane)
- IT 58698-89-8D, ***Silane***, triethoxy(3-isothiocyanatopropyl)-, reaction products with nickel oxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ethoxazene)

L12 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1975:421776 CAPLUS
 DN 83:21776
 ED Entered STN: 12 May 1984
 TI Chemical purification of silicon. II. Determination of impurities in trichlorosilane and crude silicon
 AU Chang, Ming-Ming; Chen, Chi-Chen; Liu, Chao-Shiuan; Chang, Chao-Ting; Shu, Frank R.
 CS Inst. Appl. Chem., Natl. Tsing Hua Univ., Hsinchu, Taiwan
 SO Journal of the Chinese Institute of Chemical Engineers (1974), 5(2), 99-105
 CODEN: JCICAP; ISSN: 0368-1653
 DT Journal
 LA English
 CC 79-6 (Inorganic Analytical Chemistry)
 AB An analytical procedure for the detn. of metal and nonmetal impurities at ppm levels in crude Si and purified SiHCl₃ was developed. Most metal impurities were detd. by direct at. absorption spectrophotometric techniques. A fluorometric method was developed for the detn. of Al. B and P were detd. via the ***methylene*** ***blue*** method and the molybdochosphoric acid method, resp. The chlorination process used is highly effective in removing impurities in the course of chem. purifn. of Si. A brief review on various analytical methods currently available for the detn. of Al, B, and P is also included.
 ST chlorosilane analysis impurity; silicon analysis impurity; ***silane*** trichloro analysis impurity; boron detn silicon trichlorosilane; aluminum detn silicon trichlorosilane; phosphorus detn silicon trichlorosilane
 IT 7439-89-6, analysis 7439-95-4, analysis 7439-96-5, analysis
 7440-02-0, analysis 7440-50-8, analysis 7440-70-2, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (detn. of, in silicon and trichlorosilane, at. absorption

spectrophotometric)
IT 7429-90-5, analysis 7440-42-8, analysis 7723-14-0, analysis
RL: ANT (Analyte); ANST (Analytical study)
 (detn. of, in silicon and trichlorosilane, spectrophotometric)
IT 7440-21-3, analysis 10025-78-2
RL: AMX (Analytical matrix); ANST (Analytical study)
 (impurity detn. in)
IT 2092-55-9D, Benzenesulfonic acid, 4-hydroxy-3-[(2-hydroxy-1-
naphthalenyl)azo]-, monosodium salt, aluminum complex 7429-90-5D,
Aluminum, Pontachrome Violet SW complex
RL: PRP (Properties)
 (spectrum of)

L12 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1974:139581 CAPLUS
DN 80:139581
ED Entered STN: 12 May 1984
TI Receptor sheet compositions for no-carbon duplicating paper
IN Ohara, Isao; Seki, Masanori; Ito, Hiroshi
PA Oji Paper Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
INCL 116G13
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 49009312	A2	19740126	JP 1972-51362	19720524
	JP 54032365	B4	19791013		
PRAI	JP 1972-51362	A	19720524		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 49009312	INCL	116G13

AB Color-forming compns. used in noncarbon copying papers are obtained by treating clay previously condensed with ***silane*** coupling agents, such as CH2:CHSiCl3, CH2:CHSi(OEt)3, and CH2:CHSi[OCH2CH(OMe)OEt]3 (I), with PhOH derivs. These compns. are useful in developing Crystal Violet lactone to give images having a bluish purple color that is stable to sunlight, and the receptor sheets thus prep'd. have good moisture resistance and long shelf-life. Thus, the solid product from the reaction of 100 g kaolin with 10 g I dissolved in 1 l. H2O was washed, dried, dispersed in 350 ml CHCl3, and boiled after the addn. of 25 ml SOCl2. The reaction product was then heated with PhOH 300 g and AlCl3 20 g at 80.degree., filtered, and dried to give a color-forming agent. A receptor sheet, prep'd. by coating a paper support with a compn. contg. this coloring agent 100 and polybutadiene-styrene latex 10 parts, formed blue violet images when pressure-contacted with a paper coated with gelatin-encapsulated Crystal Violet lactone and benzoyl leuco ***methylene*** ***blue***.

ST pressure copy paper receptor; clay copy paper receptor

IT Copying paper
(pressure-sensitive, ***silane*** deriv.- and phenol deriv.-modified clay receptor layers for)

IT Clays

Kaolin, uses and miscellaneous

RL: USES (Uses)

(***silane*** deriv.- and phenol deriv.-modified, for receptor layers for pressure-sensitive copying paper)

IT 52578-68-4

RL: USES (Uses)

(clays modified by phenol and, for pressure-sensitive copying paper receptor sheets)

IT 75-94-5 78-08-0 7803-62-5, ***Silane***

RL: USES (Uses)

(clays modified by phenol derivs. and, for pressure-sensitive copying paper receptor sheets)

IT 108-95-2, uses and miscellaneous

RL: USES (Uses)

(clays modified by ***silane*** derivs. and, for pressure-sensitive

copying paper receptor sheets)

L12 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1967:460646 CAPLUS
DN 67:60646
ED Entered STN: 12 May 1984
TI Determination of sulfide sulfur in trichlorosilane
AU Shafran, I. G.; Vzorova, I. F.; Dorosinskaya, M. I.; Fidlon, L. K.;
Yur'eva, V. A.
SO Trudy IREA (1966), No. 28, 15-23
CODEN: TKRKAM; ISSN: 0371-876X
DT Journal
LA Russian
CC 79 (Inorganic Analytical Chemistry)
AB Sulfide S was detd. by hydrolysis of SiHCl₃ and subsequent sweeping out of the resulting H₂S by a stream of N₂:H₂S was then detd. colorimetrically by formation of ***methylene*** ***blue*** (Gustafsson, CA 55: 3301g) or by the luminescent method (Wronski, CA 55: 20758e) which involves acetoxymercurifluorescein. In com. pure SiHCl₃ the content of S was 2 times 10⁻² - 1 times 10⁻⁴%. The relative error of detn. in samples contg. 10⁻⁷% S was ± 10%.
ST SULFIDES DETN CHLOROSILANES; CHLOROSILANES ANAL SULFIDES; ***SILANES*** CHLORO ANAL SULFIDES; ***METHYLENE*** ***BLUE*** S DETN
IT 18496-25-8, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in trichlorosilane)
IT 10025-78-2
RL: AMX (Analytical matrix); ANST (Analytical study)
(sulfide detn. in)

L12 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1964:14427 CAPLUS

DN 60:14427

OREF 60:2519a-d

ED Entered STN: 22 Apr 2001

TI Sources of error in the preparation of samples for the absolute calibration of solutions of β -emitters with a 4.pi.-counter

AU Klumper, Josef; Majerova, Miroslava

CS Czech. Acad. Sci., Prague

SO Jaderna Energie (1963), 9, 258-66

CODEN: JADEAQ; ISSN: 0448-116X

DT Journal

LA Unavailable

CC 13 (Nuclear Technology)

AB The following factors were studied: (1) Dilution of the solns.: A dilution factor of apprx. 3000 is usually necessary, and should be reached in 2 stages. Thorough mixing is important: Swirling a ***methylene*** ***blue*** soln. 10 times, still left concn. gradients of 1%. (2) Stability of solns.: Reactions with other soln. components, with walls of container, or with the atm. may cause loss of active material. The relative effect increases with increasing dilution, but the amt. of carrier which can be used is limited by admissible self-absorption. (3) Adsorption: Expts. were carried out on the adsorption of Na⁺, Co²⁺, and PO₄³⁻ on surface of glass; glass coated with methyl-siloxane, methylchlorosilane, paraffin, or fat; poly(vinyl chloride); and polyethylene. (4) Self-absorption of radiation in sample: This can never be reduced to zero, because crystal size has a lower limit even at great dilution of soln. being evapd., so that self-absorption within the crystal always remains. Absorption by neighboring crystals is calcd. from a simple formula. The optimum carrier concn. found this way is similar to that usually used, but this calcn. gives a theor. justification. (5) Supports for evap. drop: The thickness of the thin film of lacquer, nitrocellulose, etc. (5-10 μ ./cm.²) is detd. by depositing the film under std. conditions. However, the metal coating necessary to make the support conductive weighs many times more. Expts. to check whether metal coating is necessary were inconclusive, and its use is therefore recommended. (6) Evapn. of the drop: A method is given for indirect weighing of the drop, by weighing a polyethylene bottle with the soln. before and after; this avoids correcting for evapn. losses during weighing. Evapn. from a frozen drop was abandoned, because active material was lost by explosion of air bubbles.

IT Siloxanes

(Me, adsorption of Co, phosphate and Na ions from soln. by glass coated

with)
IT Fats
(adsorption of Co, phosphate and Na ions from soln. by glass coated with)
IT Paraffins
(adsorption of Co, phosphate and Na ions from soln. on glass coated with)
IT Phosphates
(adsorption of, from soln. onto glass in calibration of .beta.-emitter solns.)
IT Adsorption
(of cobalt, Na and phosphate ions by glass, in calibration of .beta.-emitter solns.)
IT 12587-47-2, Beta ray
(-emitters, prepn. and calibration of solns. of)
IT 9002-86-2, Ethylene, chloro-, homopolymer
(adsorption of Co, phosphate and Na ions from soln. by glass coated with)
IT 993-00-0, ***Silane***, chloromethyl- 9002-88-4, Ethylene polymers
(adsorption of Co, phosphate and Na ions from soln. onto glass coated with)
IT 7440-48-4, Cobalt
(adsorption of, from soln. by glass in calibration of .beta.-emitter solns.)
IT 7440-23-5, Sodium
(adsorption of, from soln. onto glass in calibration of .beta.-emitter solns.)

L12 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1960:108731 CAPLUS

DN 54:108731

OREF 54:20614b-i,20615a-c

ED Entered STN: 22 Apr 2001

TI Color reactions on silicon-organic compounds and their application in colorimetric analysis

AU Kreshkov, A. P.; Bork, V. A.

CS D. I. Mendeleev Chem.-Technol. Inst., Moscow

SO Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya

Tekhnologiya (1960), 3, 410-15

CODEN: IVUKAR; ISSN: 0579-2991

DT Journal

LA Unavailable

CC 7 (Analytical Chemistry)

AB Qual. color reactions were found for the following classes of Si-org. compds.: phenoxy silanes (I), hexaalkyl disilanes (II), and aminosilanes (III), and also HSiCl_3 and SiCl_4 . Photometric methods of analysis of some Si-org. compds. and their mixts. were developed. I with Cu-NH_3 complex form a green ppt. or a green coloration, owing apparently to the formation of a complex compd. of Cu with the phenol in an NH_3 medium (min. detected: 5-10 mg.). I with concd. HNO_3 give a red or yellow color (min. detected: 0.8-0.08 mg.). I solns. decolorize Br, and a ppt. of tribromophenol is formed (min. detected 2-0.08 mg.). I with Ca hypochlorite or Br water give a light-blue or green color (min. detected: 1.6-0.4 mg.). HSiCl_3 or its soln. in AcOH or C_6H_6 gives with a AcOH soln. of $(\text{NH}_4)_2\text{MoO}_4$ a stable dark-blue color (min. detected: 0.1-0.01 mg.). HSiCl_3 gives with Ag ammoniate a black ppt. of metallic Ag (min. detected: 0.1-0.001 mg.). SiCl_4 with HI or KI liberates iodine; iodine is also evolved by the interaction of SiCl_4 vapors on KI . $\text{K}_2\text{Cr}_2\text{O}_7$ in dil. HNO_3 forms with methoxy- and ethoxysilanes a blue-violet color; in the presence of SiCl_4 the formation of the color is retarded. SiCl_4 decolorizes an alc. soln. of $\text{Fe}[\text{Fe}(\text{SCN})_6]$. II heated with P_2O_5 yield $(\text{R}_3\text{Si})_3\text{PO}_4$; the C_6H_6 ext. of the latter, decompd. by molybdate HNO_3 soln. on heating, yields a cryst. ppt. of phosphomolybdc acid. II with concd. H_2SO_4 yield $(\text{R}_3\text{Si})_2\text{SO}_4$; the petr. ether ext. of the latter, decompd. by a BaCl_2 soln. acidified with HCl , yields a ppt. of BaSO_4 . $\text{Si}(\text{NHPh})_4$ or $\text{Me}_2\text{Si}(\text{NHPh})_2$ with a dil. soln. of $\text{K}_2\text{Cr}_2\text{O}_7$ acidified with H_2SO_4 gives a dark-blue color, characteristic of the PhNH group; on a heating the reaction mixt., $\text{Me}_2\text{Si}(\text{NHPh})_2$ forms a porous greenish mass and $\text{Si}(\text{NHPh})_4$ forms a ppt. of SiO_2 (min. detected: 0.5 mg.). III with a satd. soln. of KIO_3 in dil. H_2SO_4 , on gentle heating, give a cherry-red color reaction of the PhNH group (min. detected: 0.5 mg.). With prolonged and vigorous heating, III yield SiO_2 with excess dry KIO_3 in concd. H_2SO_4 . $\text{Si}(\text{NHPh})_4$ with dry KBrO_3 in the

presence of a small amt. of dil. H₂SO₄ gives on gentle heating an orange ppt. together with the sepn. of free Br (min. detected: 2-3 mg.). PhNH₂ and Me₂Si(NHPh)₂ give, under these conditions, a cherry-red color. The detn. of the phenoxy groups is based on the hydrolytic sepn. of the group in the form of phenol and its subsequent detn. according to the blue color obtained by the interaction of phenol with Cl- or Br-H₂O in the presence of NH₄OH. The detn. of impurities of EtOH with Fe(SCN)₃ is based on the capacity of the alcs. to dissolve Fe(SCN)₃ with the formation of a red color, whereas the alkoxy silanes do not show this property. To 5-ml. portions of EtOH solns. in tetraethoxysilane, add 0.1 g. dry Fe(SCN)₃; after 40 min., centrifuge and measure photometrically. The detn. of alcs. with methyl violet is based on the capacity of the former to dissolve the dye with the formation of a violet soln.; to 10 ml. of the MeOH-EtOH solns. in the corresponding tetraalkoxysilanes, add 0.1 g. dry powder of methyl violet, stir, allow to stand 20 min., centrifuge, and measure photometrically. Ext. the impurities of phenol with H₂O in the cold, add 3 drops 10% FeCl₃ or 3 drops of Cu-NH₃ complex, and measure colorimetrically. The detn. of the ethoxy group is based on its sepn. in the form of the corresponding alc. and the detn. of the latter in C₆H₆ soln. with ***methylene*** ***blue***; treat the sample during 20 min. in the cold with portions of satd. NaOH amounting to half the vol., add some C₆H₆, evap. the alc. with C₆H₆, and dil. the vol. of the liquid to 5 ml. with C₆H₆; stir the mixt. with anhyd. CuSO₄ to remove water, add about 0.05 g. ***methylene*** ***blue***, allow to stand 10 min., centrifuge, and measure photometrically. The detn. of trimethylchlorosilane in the presence of other methylchlorosilanes is based on the interaction of trialkylchlorosilanes with P₂O₅; heat the soln. with 0.1-0.15 g. P₂O₅ 10 min., ext. the ester with C₆H₆, transfer to a volumetric flask, heat 5 min. with 1 ml. satd. (NH₄)₂MoO₄ and 5 drops concd. H₂SO₄, allow to stand, add 5 drops 5N H₂SO₄ and 0.5 ml. 5% SnCl₂, dil. to the mark with 2N H₂SO₄, and measure photometrically. Hexamethyl and hexaethyl disiloxanes can be detd. in the same manner. The detn. of HSiCl₃ is based on the formation of the Si-Mo complex and its redn. to molybdenum blue under the action of (NH₄)₂MoO₄ on HSiCl₃; to small amts. of HSiCl₃ soln. in anhyd. AcOH (contg. 2-8 mg. HSiCl₃), add 10 drops 5% (NH₄)₂MoO₄ acidified with AcOH, and then 4 ml. 2N AcOH, centrifuge the ppt.; to the soln., add water to 50 ml., allow to stand 30 min., and measure. The detn. of SiCl₄ impurities in alkoxy silanes is based on the decoloration of SiCl₄ soln. with Fe(SCN)₃; add 0.1-0.6 ml. of SiCl₄ soln. in tetraethoxysilane to 3 ml. of the dil. alc. soln. of Fe(SCN)₃, dil. to 4 ml., with C₆H₆, and measure photometrically. 22 references.

IT Phenoxy group
(detn. in organo-Si compds.)

IT Ethoxy group
(detn. of, in tetraalkoxysilane)

IT Color reactions
(of silicon-org. compds.)

IT 7803-62-5, ***Silane***
(alkoxy and phenoxy derivs., color reactions and detection of)

IT 15416-74-7, Pyridinium, 1-dodecyl-
(chromatographic sepn. from onium compds.)

IT 78-10-4, Ethyl silicate, Et₄SiO₄ 107-46-0, Disiloxane, hexamethyl-
994-49-0, Disiloxane, hexaethyl- 5700-43-6, Silantetramine,
N,N',N'',N'''-tetraphenyl- 13435-09-1, Silanediamine,
1,1-dimethyl-N,N'-diphenyl-
(color reactions and detection of)

IT 7440-21-3, Silicon
(compds., color reactions and detection of)

IT 13598-78-2, Silylamine
(derivs., color reactions and detection of)

IT 10025-78-2, ***Silane***, trichloro- 10026-04-7, Silicon chloride,
SiCl₄
(detection and detn. of)

IT 62-53-3, Aniline
(detection of)

IT 75-77-4, ***Silane***, chlorotrimethyl-
(detn. of, in chloromethylsilanes)

IT 67-56-1, Methanol
(detn. of, in tetraalkoxysilane)

IT 64-17-5, Ethyl alcohol
(detn. of, in tetraethoxysilane)

IT 1590-87-0, Disilane

(hexaalkyl derivs., color reactions and detection of)
IT 340-02-3, Arsine, methylphenyl(trifluoromethyl)-
(prepn. of)

L12 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1960:61296 CAPLUS

DN 54:61296

OREF 54:11818i,11819a-c

ED Entered STN: 22 Apr 2001

TI Analysis of the chlorine content in silicon-organic compounds

AU Syavtsillo, S. V.; Shemyatenkova, V. T.; Neshumova, A. M.

SO Zavodskaya Laboratoriya (1958), 24, 287-9

CODEN: ZVDLAU; ISSN: 0321-4265

DT Journal

LA Unavailable

CC 7 (Analytical Chemistry)

AB The efficiency of the action of various hydrolyzing media (H₂O, EtOH, 1:1 H₂O-EtOH, 0.1N aq. KOH, 10% NH₄OH, and 1:1 EtOH-ice water) toward alkyl- and arylchlorosilanes was investigated. The best hydrolyzing medium was the mixt. EtOH-H₂O (in a 1:1 ratio by vol.). When analyzing H-contg. Si-org. compds., to remove H, which reduces Hg, it is necessary to dissolve the compd. to be analyzed in the EtOH-H₂O mixt. by boiling 1-2 min. with an excess of concd. alkali (phenolphthalein) and to neutralize and acidify with 0.5N HNO₃, before titration. To det. the total content of Cl, transfer 0.1-0.15 g. of the compd. in a thin-walled ampul to a 750-ml. Erlenmeyer flask contg. 50-75 ml. liquid NH₃. Introduce 2-3 small pieces (0.1-0.2 g.) of Na. Break the capillary end of the ampul with a glass rod, and if the soln. is discolored, add a few more pieces of Na. Stir the soln. 5-10 min., break the ampul into small pieces, and add more Na until the blue color does not remain for 10 min.; approx. 1 g. Na is necessary. After complete volatilization of NH₃, add 20-5 ml. EtOH to the dry residue to react with the excess Na, wash the walls and the rod with 20-5 ml. H₂O, neutralize the soln. with 0.5N HNO₃, add a 2-3 ml. excess, and det. Cl by the mercurimetric or argentometric methods. A blank is necessary; the time of analysis is 1 hr. Before the mercurimetric titration, neutralize the liquid with 0.5N HNO₃ (phenolphthalein), add 2-3 ml. excess; then add 1-2 drops 0.01% alc. soln. of ***methylene*** ***blue*** and 10 drops 2% diphenylcarbazone soln. and titrate with 0.1N Hg(NO₃)₂ to the light redblue (or violet) change.

IT 7782-50-5, Chlorine

(analysis, detn. in org. Si compds.)

IT 7782-50-5, Chlorine

(analysis, detn. of free Cl, in hypochlorite solns.)

IT 7803-62-5, ***Silane***

(chloro derivs., Cl detn. in)

IT 7440-21-3, Silicon

(compds., chlorine detn. in org.)

L12 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1942:7856 CAPLUS

DN 36:7856

OREF 36:1259g-i,1260a-f

ED Entered STN: 16 Dec 2001

TI The state of analytical research work in the aluminum and magnesium industry

AU Vasil'ev, K. A.

SO Trudy Vsesoyuz. Konferentsii Anal. Khim., Akad. Nauk S. S. S. R. (1939), 1, 337-55

From: Khim. Referat. Zhur. 1940, No.2, 61-2

DT Journal

LA Unavailable

CC 7 (Analytical Chemistry)

AB Anal. methods for raw materials, intermediate products and the final products of the Al-Mg industry were unified. A rapid explosion method is proposed for the decomprn. of bauxites which are not decomprd. by acids. Mix the bauxite sample with 10 g. of Na₂O₂ and 0.6 g. of ashless carbon in a Ni crucible and burn the mixt. The decomprn. is completed after 1 min. For bauxites which can be decomprd. with acids, decomprn. with a mixt. of HCl and H₂SO₄ is proposed. SiO₂ can be detd. by the accelerated method of coagulating the gelatinous SiO₂ in a strongly acid soln. Al is detd. by difference from the sum Al₂O₃ + Fe₂O₃, + SiO₂ + P₂O₅. Fe₂O₃ is detd. by

titrating with Cr₂O₇²⁻ in the presence of diphenylamine after redn. with SnCl₂. The barite method is proposed for the rapid detn. of Na₂O. Boil the sample with 1 g. of Ba(OH)₂, pass CO₂ into the hot soln. until colorless to phenolphthalein and transfer the soln. with the ppt. into a measuring flask. Filter off an aliquot part of the soln., destroy the bicarbonates by boiling, filter and titrate the Na₂CO₃ with 0.1 N HCl in the presence of a mixed indicator (methyl orange + indigo carmine). In the anal. of aluminate solns. a colorimetric method with NH₄ molybdate is proposed for small amts. of SiO₂. The detn. is carried out in the Popov photocalorimeter. For detg. Al₂O₃ and total Na₂O best results were obtained with the following methods: (1) The method of Tsimbal. Det. the total alky. (Na₂O) in one portion of the aluminate soln. by titrating with HCl with boiling in the presence of phenolphthalein. In a 2nd portion titrate Al₂O₃ + Na₂O with HCl in the presence of an indicator with a light filter (di-Methyl yellow and ***methylene*** ***blue***) (pH 3.25) and det. Al₂O₃ from the difference of the 2 titrns. (2) The method of Bogolepov. Det. total alky. by titrating with HCl in the presence of rosolic acid, first in the cold, later with boiling. Det. Al₂O₃ + Na₂O by titrating with acid in the presence of p-azobenzylanilinebenzenesulfonic acid (pH 1.9-3.3). The calcimeter of Tsimbal (a modified calcimeter of Scheibler) is proposed for detg. carbonates. In the anal. of metallic Al and of its alloys Si can be detd. in the VAMI photocalorimeter (the colorimeter devised and accepted by the All-Union Sci. Inst. for Research in the Aluminum and Electrode Industry). The metal is first treated with an alk. soln. prep'd. from metallic Na. A method for the simultaneous polarog. detn. of Cu and Zn in metallic Al has been developed. The sample is decompd. with NaOH and the Cu and Zn sulfides are dissolved and detd. polarographitally. Na is detd. volumetrically by the Mg uranyl acetate method. For analyzing metallic Mg it is recommended to decomp. the NH₄Cl sample in the presence of Br. This excludes losses of Si in the form of ***silanes***. For detg. Ca a preliminary sepn. of Mg from Ca is carried out. This method is based on the different solubilities of MgO and CaO in water. Zn is sepd. with H₂S and detd. in the form of Zn anthranilate. Good results are also obtained from the polarog. detn. of Cu and Zn in Mg alloys. The modified Stark-Howell method is used in the anal. of F compds. for detg. F. Si can be detd. by oxine in the presence of F. A no. of other detns. is also described.

IT Bauxite
 (anal. of)
 IT Aluminates
 (detn. of)
 IT Alkalinity
 Carbonates
 (detn. of, in Al-Mg industry)
 IT 7429-90-5, Aluminum 7439-95-4, Magnesium
 (alloys, anal. of, in industry)
 IT 7440-38-2, Arsenic 7782-41-4, Fluorine
 (anal., detn.)
 IT 7440-23-5, Sodium
 (anal., detn. in Al)
 IT 7440-50-8, Copper 7440-66-6, Zinc
 (anal., detn. in Al and Mg alloys)
 IT 7440-70-2, Calcium
 (anal., detn. in Mg)
 IT 7440-21-3, Silicon
 (anal., detn. in presence of fluorides, detn. in Al alloys)
 IT 1313-59-3, Sodium oxide, (Na₂O)
 (detn.)
 IT 1344-28-1, Alumina
 (detn. of)
 IT 1309-37-1, Iron oxide, Fe₂O₃ 7631-86-9, Silica
 (detn. of, in Al-Mg industry)

=> s triisopropylsilyloxycarbonyl and methylene

2 TRIISOPROPYLSILYLOXYCARBONYL

121311 METHYLENE

823 METHYLENES

121805 METHYLENE

(METHYLENE OR METHYLENES)

L13 0 TRIISOPROPYLSILYLOXYCARBONYL AND METHYLENE

=> s*isopropylsilyloxycarbonyl and methylene
1 ISOPROPYLSILYLOXYCARBONYL

121311 METHYLENE

823 METHYLENES

121805 METHYLENE

(METHYLENE OR METHYLENES)

L14 0 ISOPROPYLSILYLOXYCARBONYL AND METHYLENE

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